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ABSTRACT

This report describes research carried out between 1996-99 which examined the extent and nature of drug education in Scottish schools. It explored young people's knowledge, attitudes, and behaviors about drugs and drug education and highlighted factors influencing the effectiveness of drug education. Research methodologies included a census of elementary and secondary schools, a student survey, interviews and focus groups with teachers and students in six schools, and an ongoing review of related literature. Results indicate that most schools had some form of drug education. There was a notable shift in provision of drug education for 6th and 7th graders. The main aims of school drug education were to provide information and promote decision making skills. Most students valued drug education. Students who used drugs believed drug education was beneficial to them. Most students were against illegal drug use and did not use illegal drugs. Interactive teaching methods showed promise for influencing students' health behaviors. Five appendixes include data on: samples, methods, and analyses; drug education context and approaches (a literature review); experiences and views of students using drugs; students' experimentation with and misuse of illegal drugs; and school drug education: main resources used. (SM)

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Drug Education in Scottish Schools 1996–1999

Kevin Lowden
Janet Powney

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Drug Education in Scottish Schools 1996–1999

Kevin Lowden
Janet Powney

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Errata – Drug Education in Scottish Schools 1996-1999

Page vi: Executive Summary. Findings – last bullet point in 'Pupils' Attitudes'

Section 1 text should read:

- 23% of secondary pupils reported misusing illegal drugs (mainly cannabis). 79% of S5 pupils and 59% of S3 pupils had been offered illegal drugs (again this was usually cannabis)

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Executive Summary

This project was sponsored by the Scottish Office Education and Industry Department and carried out by the Scottish Council for Research in Education between September 1996 and June 1999. The project aimed to:

- provide an overview of the extent and nature of drug education in Scottish schools
- explore young people's knowledge, attitudes and behaviours concerning drugs and their drug education
- highlight the factors influencing the effectiveness of drug education.

***Note:** This project uses the term 'drug misuse' when referring to the use of illegal drugs. The term 'substance misuse' refers generally to the range of materials such as alcohol, tobacco, inhalants and illegal drugs which can induce changes of a mental and/ or physical nature.*

■ SOME OF THE KEY FINDINGS

The extent and nature of school-based drug education (see 1.1 to 1.4)

- Specific drug education was taught from Primary 6 to Secondary 3.
- The most notable shift in surveyed provision of drug education from 1997 to 1999 has been the increase in drug education provided for P6 and P7 pupils.
- Most primary and secondary schools' drug education was resource driven (*Drugwise, TACADE* and in-house materials) rather than based on clear theories or approaches.
- The principal aims of schools' drug education were to provide information and promote pupils' decision-making skills.

Pupils' attitudes and behaviours concerning substance misuse (see 2.1 to 2.5)

- Between 1997 and 1999 there was little change in the numbers of pupils who reported regularly smoking. The highest levels of smoking were among S5 pupils with 19% smoking tobacco at least once a week.
- While the levels of reported alcohol consumption decreased slightly over the period 1997 to 1999, the figures for S5 pupils (75% drinking alcohol at least once per week) are a cause for concern.
- 96% of primary six and 91% of secondary pupils were against using illegal drugs. However, older secondary pupils were more tolerant of cannabis use which was perceived as being less harmful than other illegal drugs.
- The majority of primary six and secondary pupils did not use illegal drugs
- 23% of secondary pupils reported misusing illegal drugs (mainly cannabis). 79% of S5 pupils and 59% had been offered illegal drugs (again this was usually cannabis).

Pupils' views on their drug education (see 2.6)

- Most pupils valued their drug education although older pupils and those reporting drug misuse were usually more critical.
- Even among those pupils misusing illegal drugs, 66% claimed their drug education had helped them reduce the risks associated with misuse.

The effectiveness of school-based drug education (see 3.1)

- Interactive teaching methods (including group discussions, role-play) show promise in influencing pupils' health behaviours.
- It is important to be realistic about what can be achieved through school-based drug education.

RESEARCH METHODS

This project had two main quantitative data collection phases, in 1997 and 1999. Each phase entailed:

- a census of secondary and primary schools (284 primary and 318 secondary covered in 1999)
- a pupil survey of a representative sample of P6, S1, S3 and S5 year group, approximately 4,400 in all of whom 1119 remained to complete the second phase.

In addition, the project used:

- interviews and focus groups in two primary and four secondary schools to provide insights into the views of teachers and pupils
- an on-going review of the literature on drug education approaches and their effectiveness to enable the research findings to be contextualised.

Analysis of the survey data reflected the need to look at changes generally between variables over the time-scale of the project and, in the case of the pupil data, to examine differences over time in tracked individuals and ascertain possible factors influencing changes. This analysis involved descriptive statistics, cross-tabulation and regression analysis.

Criteria for effective drug education

Drug education in this report refers to school-based content which is systematically timetabled into the curriculum and targeted at young people with the intention of having an impact on their health behaviours and perceptions concerning the use of alcohol, tobacco, inhalants and illegal drugs.

In this project effective drug education is defined as having an impact on:

- young people's health *behaviours* (by stopping, or reducing substance misuse and illegal drug misuse or reducing the risks associated with misuse)
- young people's *attitudes* to substance misuse (by promoting attitudes which reflect positive health choices)
- young people's drug and substance *knowledge* (by promoting accurate knowledge about substances and their effects).

FINDINGS

1.1 The extent of drug education provision in Scottish schools (page 10)

Primary schools

- The majority of primary schools claimed to provide some form of drug education, mainly for P6 and P7 pupils.
- Over the length of the project there was some increase in the percentage of primary schools claiming to provide drug education (83% in 1997; 92% in 1999).
- The biggest increase was in drug education provided for P6 and P7 pupils.

Secondary schools

- Nearly all secondary schools reported providing some form of drug education; 26% provided drug education to all their year groups.
- It was mainly the S1–S3 year groups who received drug education content as a separate topic (around 80% of schools).
- Older pupils were more likely to experience drug education topics as an integrated part of wider personal, social and health education.

1.2 The nature of schools' drug education (page 11)

- Most primary and secondary schools' drug education is resource driven rather than based on clear theories or approaches. Schools share the same overall aim for drug education: to provide accurate information on drugs to promote pupils' decision-making skills.
- Most Scottish drug education is based on Drugwise and TACADE resources and heavily customised with parts of other materials.
- The actual content and style of drug education is influenced by:
  - teachers' perceptions of pupils' needs and abilities
  - teachers' attitudes and understanding concerning the aims of drug education
  - awareness and availability of resources and support
  - local authority policies
  - staff skills and staff development opportunities
- Increasingly, schools are monitoring pupils' satisfaction and needs concerning drug and health education.

1.3 Staff development and support (page 12)

- While most primary and secondary teachers valued drug education training, the majority had not received such training in the last two years.
- Training about appropriate and effective approaches was in greatest demand.
- Schools with formal written policies on drug education were more likely to conduct active evaluation of drug education and provide training for teachers to enhance their skills.

1.4 Working with other services (page 14)

- Most schools valued input from external agencies to their drug education provision, these sources providing advice, training and supplementary teaching.
- The police were by far the most commonly used external service (by 71% of secondary and 68% of primary schools).
- Local health boards and drug agencies were the next most commonly used sources of support, particularly by secondary schools.

▶ *2.1 Pupils and tobacco and alcohol (page 16)*

- Between 1997 and 1999 there was little change in the numbers of pupils who reported smoking regularly. In 1999, 3% of P6, 4% of S1, 13% of S3 and 19% of S5 pupils reported smoking tobacco at least once week.
- Among secondary pupils, 62% of regular smokers were girls compared with 38% boys.

- Reported regular alcohol consumption (drinking something alcoholic at least once a week) decreased slightly over the period 1997 to 1999. In 1999, 15% of P6, 17% of S1, 47% of S3 and 75% of S5 pupils reported drinking alcohol at least once week.

2.2 Pupils and illegal drug misuse (page 18)

The majority of pupils surveyed (96% primary and 91% of secondary) were against taking illegal drugs; those regularly taking illegal drugs were mainly cannabis users with a very small number of school-aged pupils taking other illegal drugs. However, by comparison, levels of reported tobacco consumption and most notably alcohol intake, can be seen as a particular cause for concern.

- There was no significant change in patterns of drug misuse across the two surveys. Most regular misuse (more than once a week to once a month) of illegal drugs consisted of cannabis smoking (12% in S3 and 23% for S5). A small minority used amphetamines (3% in S3 and S5 – a reduction from 6% and 9% in 1997) and LSD (2% in S3 and 1% in S5)
- No pupils reported injecting drugs.

2.3 Pupils who misuse illegal drugs (page 19)

Compared with those pupils who do not take illegal drugs, pupils who claim to use cannabis and 'harder' drugs on a frequent basis (from more than once a week to once a month) are typically:

- More likely to drink and smoke, have friends who drink, smoke and take illegal drugs, find it difficult to refuse illegal drugs if offered them and were more likely to feel they are not respected by teachers but are respected by their close friends (who share similar characteristics and views).
- More negative towards school in general, more negative towards school-based drug education, more likely to be depressed by school, more likely to be anxious about school work and performance (especially girls), more willing to skip school if they get the chance and less likely to feel a part of their school.
- Less likely to report they get on well with parents and less likely to participate in sports at school.

2.4 Pupils' reasons for using illegal drugs (page 20)

- In both surveys the majority of those misusing illegal drugs claimed they:
  - did so because it felt good
  - did not have low self-esteem.
- Most pupils, including those who misused drugs, claimed they were not pressurised to take drugs and could resist attempts by others to make them take drugs.
- In contrast with older pupils, those in P6 were more concerned about peer pressure.

2.5 Pupils' attitudes to illegal drugs (page 21)

- Most pupils were against taking illegal drugs but older pupils (S3 and S5) possessed more tolerant attitudes towards taking cannabis. Users of cannabis did not see themselves as 'drug misusers'.
- Over 40% of S3 and over half of S5 believed cannabis should be legalised. Older pupils saw taking cannabis as part of enhancing social and recreational experiences. They perceived its use as similar to the way they saw adults using alcohol.

- Most pupils were strongly against the use of what they term 'hard' drugs such as heroin and cocaine.

2.6 Pupils' views on their drug education (page 21)

Both surveys consistently indicated that:

- most pupils (76% secondary and 85% primary) value the drug education they receive
- the most critical pupils are those in S3 and S5 and those using illegal drugs
- pupils in S3 and S5 and those using illegal drugs were more likely to be bored and frustrated by drug education on the grounds that it was often repetitive and did not reflect their perceived needs
- despite these criticisms, around 66% of pupils who claimed to use illegal drugs reported that their drug education had had a positive impact on their drug misuse:
  - 38% that their drug education had helped them to reduce the risks associated with misuse
  - 18% that their drug education had helped to reduce the amount of drugs they used
  - 10% that their drug education had helped them stop altogether
  - 34% that their drug education had had no effect on their drug misuse.

▶ *3.1 Factors influencing the effectiveness of drug education (page 24)*

Analysis of pupils tracked over the duration of the study revealed that:

- an association exists between participative teaching methods and a reduction in pupils' reported alcohol consumption
- aspects of positive self-esteem were associated with a pro-drug attitude and a greater use of cigarettes, cannabis and other illegal drugs and, for S1–S3 only, greater alcohol intake
- schools with higher levels of free school meal entitlement were associated with pro-drug attitudes among surveyed pupils.

3.2 Themes arising from the literature review on effective drug education (Appendix 2) (page 37)

The review of the literature highlighted many suggestions to improve the effectiveness of school-based drug education, including:

- taking into account what has already been learned about the factors which influence the effectiveness of drug education
- adopting participative teaching methods with a range of strategies geared to the context and needs of the target group and working with others in the wider community, showed most promise.

■ DRUG EDUCATION IN SCOTLAND: ISSUES AND QUESTIONS

Some points for debate and discussion (page 28)

The complexity of drug misuse

- The complex links between young people's self-esteem and self-image need to be reflected in drug education approaches: for example it should not be assumed that all those taking illegal drugs have low self-esteem.
- Differences in values espoused at school, in pupils' own cultures and in their families can become especially apparent in drug education and other aspects of health education: this presents a challenge for drug education and again emphasises the need to tailor approaches to pupils' needs.

Teaching drug education

- Teachers can often feel uncomfortable about teaching drug education to children younger than P7 or P6.
- Many think they lack knowledge and experience in the area of illegal drugs. Are the anxieties teachers express about lack of knowledge concealing stress about the ambiguity of the teacher's role and legal position?
- There is scope for increased teacher-pupil communication concerning pupil needs and strategies to provide appropriate drug education.
- A key focus in drug education training for teachers must be on developing effective teaching approaches.
- While external support to teach drug education is welcomed by teachers, we speculate that in certain cases it might perpetuate teachers' own reluctance and perceived vulnerability in taking the lead in drug education, and also pose problems in ensuring external support is coherent with each school's own philosophy and curriculum.

Further research

- Given the levels of reported alcohol use among young people in this study, it seems that more work is needed to explore the factors which underlie such use and the measures which can impact on alcohol use.
- The impact of particular teaching approaches and other 'in-school' factors such as school ethos and the influence of the school management on the effectiveness of school-based drug education warrant more study.

Towards effective drug education

- The findings highlight the difficulty in developing and teaching drug education programmes which suit the needs of all pupils.
- A strong theme which emerges is that school-based education can play an important role in influencing young people's drug behaviours and attitudes. However, the complexity of the issues involved means that realistic expectations of school-based drug education are necessary.
- School-based drug education can be enhanced by working closely with relevant services and organisations in the community and by raising pupils' awareness of local sources of information and support.

■ CONCLUSIONS

Given the many reported caveats concerning effective drug education and the challenges it faces, it is tempting to be pessimistic about what drug education can achieve. However:

- The research findings suggest that particular teaching methods, ie participative methods, have the potential to affect substance-misuse behaviours.
- The research has shown that the majority of those pupils using illegal drugs (mainly cannabis), while critical of their drug education, believe this education has been beneficial to them. In particular, it has helped to reduce the risks associated with such use and the amounts of substance used.
- Previous research and literature on effective drug education has established general guidelines and factors which can promote effectiveness. This information is beginning to inform policy and practice and provides a basis on which to build.

1 Introduction

This report focuses on the findings of a drug education research project conducted by the Scottish Council for Research in Education (SCRE) over the period September 1996 to June 1999. The study, funded by the Scottish Office Education and Industry Department (SOEID), had three main aims. These were:

- to provide an overview of the extent and nature of drug education in Scottish schools
- to explore young people's knowledge, attitudes and behaviours concerning drugs and their drug education
- to highlight the factors influencing the effectiveness of drug education.

The research approach and evidence base

Details of the sampling, methods of data collection and analysis used in the research are given in Appendix I. However the principal sources of evidence have been:

- a census of secondary and primary schools in Scotland conducted in 1997 and again in 1999 to identify any developments in school-based drug education
- a pupil survey of a representative sample of P6/7, S1, S3 and S5 year groups. In the first phase of the project, responses were received from over 1100 pupils in each of these year groups. The second and final phase of the project followed up a proportion of these young people (1177 in total, of whom 58 had left school in S5 in '97) almost two years later to look at any shifts in their behaviour, attitudes and knowledge concerning substance misuse. This provided comparisons with age groups over time and also, when certain school drug education factors were included, facilitated an investigation of particular factors that might influence the effectiveness of drug education.
- interviews and focus groups in two primary and four secondary schools which provided insights as to the views of teachers and pupils
- an ongoing review of the literature on drug education approaches, initiatives and their effectiveness which enabled the research findings to be put in context.

Response rates for the census in 1997 and 1999 were sufficient to provide a generalisable overview of drug education in Scottish schools. In 1997 the first pupil survey gathered data from over 4000 pupils and enough of these were followed up from the first phase to allow comparisons between the same age-groups and longitudinal analysis of tracked pupils (particularly S1 to S3 and S3 to S5). However, the attrition rate for the follow-up pupil survey was high. It was always recognised that there would be difficulties in tracking those in P6 to their various secondary schools and the S5 pupils when they left school. However, when attempting to trace and obtain information from original S1 and S3 pupils, pupils one might expect to be easier to reach, there was surprising mobility. Additionally, given the sensitive nature of the project, some pupils who had given details which allowed identification in the first survey were reticent in doing so for the second survey. Nevertheless, the researchers believe that the samples and methods are robust enough to ensure useful analysis and findings which have general application. A breakdown of the response rates for census and pupil surveys is provided below.

Table 1: Total number of participating census schools in 1997 and 1999

	Primary schools		***Secondary schools***	
Year	*1997*	*1999*	*1997*	*1999*
Target sample number	405	405	405	405
Responses	198 (49%)	110 +174* = 284 (70%)	188 (46%)	166 +152* = 318 (78%)

* Use of abridged census to reach non-participants to full census questionnaire

The secondary sample includes representation from independent schools

Table 2: Numbers of pupil respondents (1997 survey) by percentage

	P6	***S1***	***S3***	***S5***	***All secondary***	***All pupils***
Total n	*1162*	*1142*	*1145*	*1181*	*3468*	*4630*
%M	51	47	48	45	47	48
%F	49	53	52	55	53	52

Table 3: Numbers of pupil respondents (1999 survey) by percentage

	P6*	***S1***	***S3***	***S5***	***Year group Unknown***	***All secondary***	***Post school***	***All responses***
Total n	*718*	*131*	*459*	*325*	*204*	*1119*	*58***	*1895*
%M	52	54	45	43	45	44	26	48
%F	48	46	55	57	55	56	74	52

* The P6 cohort in 1999 was a new sample of P6 pupils from the same school as in 1997

** The post-school respondents (55 in '97) were too low to include in the age stage analysis

■ Definitions

Drugs and substances

The scope of the study includes substances such as alcohol, tobacco, and the wide range of materials including illicit drugs and volatile substances seen to have associated health-related effects and risks.

Drug misuse and substance misuse

Definitions of drug misuse vary and are notoriously problematic. For example, terms such as drug use, drug misuse, drug abuse, recreational drug use, experimental drug use and problematic drug use are used. Such terms sometimes overlap, are ambiguous or reflect the debate that exists about the most appropriate way to classify patterns of substance use. Moreover, it is often difficult to separate definitions of drug misuse from the various value stances which underpin them. For the purposes of clarity this research project adopts the term *'drug misuse'* when referring to the use of illegal drugs and does not enter into the debate about misuse or abuse. The term *'substance misuse'* is adopted when referring generally to use involving any of a range of materials which can induce changes of a mental and/or physical nature. In addition to illegal drugs this definition can include alcohol, tobacco, inhalants.

Drug education

Drug education in this report refers to school-based content which is timetabled in the curriculum and targeted at young people with the intention of impacting on their health behaviours and perceptions concerning the use of alcohol, tobacco, inhalants and illegal drugs.

Criteria for effective drug education

The criteria for effective drug education adopted by this study are school-based drug education which impacts on:

- young people's health behaviours (stops, or reduces substance misuse and illegal drug misuse or reduces the risks associated with misuse)
- young people's attitudes to substance misuse (promotes attitudes which reflect positive health choices)
- young people's drug and substance knowledge (promotes accurate knowledge about substances and their effects).

Our analyses consider factors which affect these measures or criteria and use a range of different sources of information and data, primarily:

- pupil self-reported details on their behaviours, attitudes, knowledge, satisfaction with their drug education and needs in this topic area
- information gathered from teachers and headteachers in the survey schools about the characteristics of the school, the extent and nature of their drug education including policies and practice over the project's life.

Our criteria of effectiveness for drug education are broader than those used by some who focus on the total prevention of substance misuse.

2 Context

National policy and drug education

Over recent years illegal drug misuse in Scotland and the wider UK has been seen as a serious problem and has continued to be a priority area for action by both the previous and current governments. Cumulative government initiatives relevant to Scotland include: the Ministerial Task Force set up in 1994 and the publication of *Drugs in Scotland: Meeting the Challenge, Report of the Ministerial Drugs Task Force* (1994); the creation of the Scotland Against Drugs agency (March 1996) and, most recently, the introduction of a drug strategy in Scotland: *Tackling Drugs in Scotland: Action in Partnership* (1999). This last development is set against the *UK White Paper Tackling Drugs to Build a Better Britain* (1998) and builds on the earlier Ministerial Task Force and other developments since 1997. The *Tackling Drugs in Scotland* strategy aims to adopt a multifaceted approach to 'challenge the drug culture' and reduce drug misuse and to limit the negative health and social effects of drug misuse at all levels of society.

At the same time as increasing political interest in challenging substance misuse a number of educational strategy documents (Advisory Council on the misuse of drugs ACMD 1993, DfEE 1995) and publications on good practice in drug education have emerged, the latter often derive guidelines for effective drug education from the empirical work done in this field (SCODA 1999a, 1999b, SCODA 1998, Howie 1997).

The Drug Action Teams throughout Scotland are the cornerstone of the current government strategy. Reporting annually to government, they are tasked with leading and co-ordinating initiatives to tackle drug misuse. Measures to challenge drug misuse and associated problems are seen as requiring active collaboration between relevant agencies, including schools. The idea is that such partnerships of agencies adopt a 'shared but focused agenda' and will 'contribute in their different ways to achieving the required outcomes' (*Tackling Drugs in Scotland* 1999).

In recent years, HM Inspector of Schools have produced reports on health and drug education which offer guidance to schools and indicate while much is being done in drug education there is still much more that could be achieved.

In November 1999, new draft Guidelines for the Management of Drug Incidents have been issued which aim to support schools in developing policies and procedures concerning drug incidents. These guidelines have been formulated by the School Drug Safety Team which comprises of representatives from health, education and police. The team will be looking next to address wider issues in school-based drug education, particularly promoting good practice.

The current government strategy recognises the links between illegal drug misuse and wider substance misuse, particularly smoking and alcohol use and the complexity of issues related to drugs but focuses mainly on illegal drug misuse. Other government initiatives are being developed to address smoking and alcohol issues (the White Paper *Smoking Kills* and a National Alcohol Misuse Strategy for Scotland are key parts of such efforts).

Drug education in the curriculum

Health education and with it drug education in Scottish schools has become more prominent over the 1990s. The Scottish Executive requires all schools to provide drug education and to have welfare policies for managing drug-related incidents (as set out in the HMSO guidelines *Tackling Drugs in Scotland: Action in Partnership* 1999). Also as Coggans *et al* (1999) highlight

> the government's ten year strategy for drug misuse emphasises the role of life-skills education, starting in primary school, and the importance of integrating such programmes within pastoral, social and health education (PSHE) in schools (HMSO 1998).
>
> Coggans *et al* (1999 p 27)

Drug education is usually addressed as a topic within the Personal and Social Development strand of the curriculum. In 1991 *Health Education in Scotland: A National Policy Statement* (Scottish Office Home and Health Department) identified health targets and described health education for schools. The publication *Scotland's Health, A Challenge to Us All: A Policy Statement* (1992 HMSO) highlighted the complex and interrelated physical, social and mental factors influencing health.

In 1993 schools were seen as having an important role to play in promoting health with the introduction of the 5–14 national guidelines on Environmental Studies. These guidelines emphasised health education as an important part of the school curriculum. The underlying philosophy or model of these guidelines is one which stresses self-esteem and empowerment as central to health promotion and 'incorporates skills development, value clarification as well as the development of knowledge and understanding' (Forrest 1999). Within the Environmental Studies guidelines, the *Healthy and Safe Living* component and other parts of the guidelines, specific content is described to help teachers develop health education. Currently, the 5–14 Environmental Studies guidelines are not fully implemented but, as Forrest notes

> schools are using a number of subject areas to address health issues. Generally, social education incorporates aspects of health related to, for example, alcohol, tobacco, drugs, relationships and sexual behaviour.
>
> (Forrest 1999 p502)

Other opportunities to provide health related content exist, such as short courses in Health Studies (implemented in 1988 for S3 upwards as part of the Standard Grade) and, for post-sixteen provision, the Higher Still programme facilitates personal/interpersonal skills and some health input. The Scottish Office Education and Industry Department and (as it was then) the Strathclyde Regional Council produced the *Health Education for Living Project* (HELP), a resource which teachers can use to develop a health education programme for all stages from pre-five to S6.

Writers such as Forrest (1999) highlight that while much progress has been made in providing health education within the curriculum, challenges such as meeting the needs of pupils and addressing the skills and concerns of teachers (such as conflicting values and issues of pupil disclosures) to meet such needs still require attention.

Young people and substance misuse

An overview of recent findings on substance misuse among young people is included in the review of literature on drug education which forms Appendix 2. Here we highlight some of the salient points to emerge from such research. Reviews of the literature on substance misuse and drug education (for example, Dorn and Murji 1992; Barnard and McKeganey 1994; Coggans and Watson 1995) conclude that despite the use of various drug education and prevention approaches there has been a steady increase in the acceptance of illegal drugs, mainly cannabis, by users and non-users as 'a taken-for-granted facet of youth culture'.

A recent survey (Todd *et al* 1999) reports that there have been significant increases in the proportion of secondary-school-age children reporting drinking something alcoholic at least once a week and a significant increase in 15 year-old boys and girls and 13 year-old girls reporting smoking tobacco at least once a week.

Until very recently, numerous national surveys, routine data sources and expert reviews reports (for example Health Education Board Scotland 1997) concluded that the incidence and prevalence of illegal drug misuse in Scotland was increasing. However, the latest surveys reveal no change or a slight decrease in illegal drug misuse among secondary-school-age pupils in the last two years (Todd *et al* 1999; Lowden and Powney 1999). The only exception to this is the increase in the proportion of 15 year-old girls reporting ever using cannabis and the increase in the proportion of 13 year-old girls reporting using magic mushrooms in the previous four weeks (Todd *et al* 1999).

Most recent surveys (for example, Todd *et al* 1999; Lowden and Powney 1999, Scotland Against Drugs 1996) reveal that cannabis is the most commonly used drug with such studies finding around 49% of 13 to 15 year-olds reporting having tried this substance. Other frequently used drugs include natural and synthetic hallucinogens, amphetamines and solvents. Only 1–2% of teenagers have tried heroin or cocaine, (HEBS 1997) and less than 2% of 12–15 year-olds (Todd *et al* 1999). The findings on levels and patterns of drug misuse arising from this SCRE research concur with the picture emerging from other surveys.

It is important to note that research reveals that most school-age young people do not take drugs. Also, a higher proportion of young people report trying drugs rather than using them. For example, one study (SHARE 1998) found that, in the case of cannabis, 8% of pupils reported using it occasionally and 3% reported regular use. Therefore misuse of illegal drugs, while presenting serious health and social issues, must be kept in perspective. Research on substance misuse shows that alcohol use among young people far surpasses the use of illegal drugs (Todd *et al* 1999, SAD 1995). The misuse of illegal drugs often makes media headlines while alcohol and tobacco use is often overlooked, yet the implications for health arising from alcohol and tobacco use are proportionately more serious than those for illegal drug misuse.

As concern over the misuse of illegal drugs has increased so have the efforts of drug education to reduce, or stop, such use among young people. Illegal drug misuse is a complex issue with multiple inter-related factors influencing health behaviours and initiatives aimed at modifying them. The next section looks at the different types of drug education approaches that have emerged in response to illegal drug and substance misuse and highlights what is known about effective drug education.

■ Drug education approaches

A more detailed review of the literature on drug education approaches and their effectiveness is provided in Appendix 2.

The main comments which arise from the wider literature on the effectiveness of the major drug education approaches which have been adopted to date are given in the following list:

- Drug education in UK schools today is the result of a process whereby different approaches have been favoured and adopted until superseded by others (HEBS 1997)
- There is vigorous debate about the value and effectiveness of certain drug education approaches (Coggans and Watson 1995; HEBS 1997). Evaluations and reviews of the literature conclude that the majority of approaches fail to prevent drug misuse among their target groups (Coggans and Watson 1995; Wragg 1992; Dorn and Murji 1992; Tobler 1986)
- Despite many approaches having a limited impact on drug behaviours, certain educational interventions have a key place in the prevention of drug misuse. They can impact on drug misuse behaviours, particularly when they reflect the needs of the target groups and the complex factors involved in health behaviours (Coggans, Haw and Watson 1999; Coggans and Watson 1995) and are based on what is already known about effective drug interventions (Goodstadt 1990).

Types of drug education approaches

From the 1960s to the present day, teaching and programmes in drugs education in numerous countries (particularly the USA, UK, Canada, Australia and many in Europe) can be seen to have consisted of, or been influenced by, five main approaches. These are:

- *Information-based approaches* – those which concentrate on providing information about drugs and their effects
- *Personal skills and values deficit approaches* – those which provide skills and values development to compensate for deficits in individuals' personal living skills and/or values
- *Resistance training* – those which focus on providing skills and personal strategies for resisting and dealing with external pressures, particularly from peers
- *Alternatives-based approaches* – those aimed at providing alternatives to drug misuse and altering the environment of young people (often using the young people as the agents of change)
- *Peer education approaches* – those which use young people's peers to influence and educate.

There has been some degree of overlap across some approaches. For example, peer-led and personal skills methods have been used in resistance training.

■ The effectiveness of drug education

Reviews of the literature on drug education approaches such as Coggans and Watson (1995) and Wragg (1992) conclude that the five main drug education approaches have produced inconclusive results, with most approaches failing to meet expectations. However, certain approaches, including the Alternatives-based approach when targeted or used with appropriate other approaches (multi-strand) have shown promise (See Appendix 2 for details). Recent work suggests that approaches using varied interactive and participative methods can be an important factor in their effectiveness (Watson, Haw and Coggans 1999).

For drug education approaches to be effective they have to be 'audience appropriate and based on methods which take developmental influences into account' (Coggans and Watson 1995). They should also possess realistic aims and objectives informed by what is already known about the influences on health knowledge, attitudes and behaviour (Goodstadt 1990).

Goodstadt and Willet (1989) claim that school-based drug education can be effective in promoting healthier behaviours and attitudes but that it has limitations. Effective drug education should be cross-curricular and integrated with other areas of school life and developments in the community. Reliance on education about drugs without support from the school, family, peers, and community will be ineffective. Approaches which involve the whole school and are integrated with related community and wider media work is a necessary precondition for effective health education, whatever the focus (Coggans *et al* 1991). Such whole school health initiatives and drug education programmes also need to ensure sufficient time for staff training, planning, delivery and quality assurance and to be accompanied by rigorous and appropriate evaluation (Coggans and Watson 1995).

Our research on drug education reported here builds on previous research by confirming patterns of substance misuse among young people. However, it adds a picture of the nature and scope of Scottish school-based drug education and recent developments in the past two years. Secondly it examines young people's self-reported behaviours related to the use of illegal drugs and other substance misuse and their school drug education. It also explores some of the key factors which influence the effectiveness of drug education.

We now look at the findings of the project, first to assess the extent and nature of drug education in Scotland, then to consider pupils' behaviours, attitudes and knowledge concerning substance misuse, and finally to highlight our findings which identify factors influencing the effectiveness of school-based drug education.

3 Drug Education in Scottish Schools

The focus of this section is on the extent and nature of drug education in Scottish Primary and secondary schools. Using a census of schools in 1997 and again in 1999 we were particularly interested in:

- assessing whether different drug education approaches were used, and if so, describing what these were
- the extent of drug education for each of the pupil year groups
- the aims and policies schools possessed concerning their drug education
- the teaching methods and resources/materials adopted by schools in providing drug education
- the extent of staff development for teachers involved with providing drug education and identification of teachers' training needs in this area
- the extent of monitoring and evaluation of drug education in schools
- the range of external agencies used to support drug education in schools.

■ The drug education approach adopted in Scottish schools

This Scottish study shows (as found elsewhere in the UK) that the personal life skills approach dominates with the main aims being to provide pupils with key social skills and abilities to use information about drugs and promote decision-making skills concerning health. Our census findings strongly suggest that there is no great variance or range of discrete approaches in drug education in Scottish schools which can easily be compared. Primary and secondary schools are using remarkably similar resources within a life-skills framework, interpreted by schools as providing accurate information and facilitating informed decision-making. However, almost all teachers adapt their drug education resources to match their perceptions of pupils' needs and abilities. So, rather than using a range of particular drug education approaches, it appears schools are providing drug education content within the Personal and Social Development/Education (PSD/E) framework, fitting broadly within the current UK health education/promotion philosophy which advocates a life-skills approach.

■ Overall patterns in drug education

The findings from the Phase 1 and Phase 2 censuses show that the numbers of Scottish schools claiming to provide some form of discrete drug education and the main resources schools use have not significantly changed in the two years. However, there has been some change in the proportion of schools claiming to provide drug education to particular year groups. As we shall see there has been a decrease in the teaching of drug education to age groups below P5 but an increase for years P6 and P7.

There was an increase in the number of primary schools claiming to possess discrete drug education policies (from 8% in 1997 to 16% in 1999). Systematic review and evaluation of drug education by schools has also increased: 75% of secondary schools and

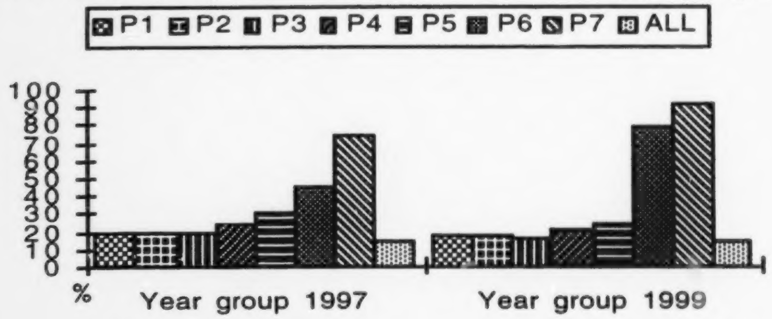
51% of primary schools claim to evaluate their drug education, compared to only 10% of secondary and 4% of primary schools who evaluated their drug education at the time of the first census.

Teachers still indicate the need for more training to provide drug education. This is particularly so for primary teachers who report the need for support to identify and meet the drug education needs of younger pupils (particularly for P1–P5).

■ The extent of drug education in Scottish schools

Across Scotland, 92% of primary schools and 99% of secondary schools claim to provide some form of drug education to pupils in their schools. However, not all these schools provide drug education to all year groups. Since 1996 there has been a slight decrease in the percentage of schools reporting the provision of drug education to those year groups below P6, (P1 19% to 18%, P2 19% to 17%). However, there has been a notable increase in the numbers of teachers reporting the provision of drug education for P6 and P7 (P6 from 45% in 97 to 78% in 1999 and for P7 73% in 1997 to 91% in 1999). This increase is so marked that it is possible that teachers have used a very broad interpretation of what constitutes drug education despite our census specifying a particular definition. Figure 1 shows the extent to which drug education is provided to year groups in primary schools.

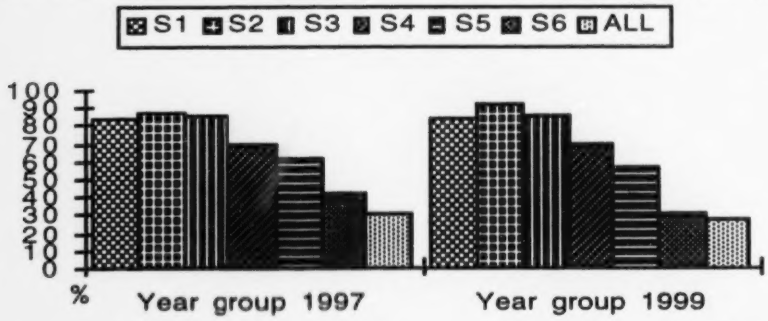
Figure 1: The extent of drug education in primary schools across pupil year groups



206 Schools responding in 96/97 *284 Schools responding in 98/99*

Census returns for 1999 indicate that 99% of secondary schools provide drug education for one or more year groups and 26% provide it for all year groups (compared with 31% for the 1997 census). Figure 2 shows the percentages of secondary school respondents claiming to provide drug education for each year group in 1997 and in 1999.

Figure 2: The extent of drug education in secondary schools across pupil year groups



206 Schools responding in 1996/7 *318 Schools responding in 1998/9*

In comparison to 1996/7 figures, the proportion of secondary schools providing drug education for S1 and S3 are about the same at around 85%. Provision for S2 has increased from 85% to 92% and remained about the same for S4 at 70%. However, there has been a decrease in the proportion of schools claiming to provide drug education for S5 (from 61% to 56%) and S6 (from 42% to 30%). It is not entirely clear why this apparent decrease has occurred. On the basis of our qualitative work we can speculate. We know that secondary teachers report that other pupils are bored with specific, discrete drug education content in PSE and teachers respond by merging drug education content in with other PSE topics. From the same sources we also know that schools will sometimes withdraw their drug education for particular year groups and revise it. The picture which emerges is one of a fluctuating, rather than steady, presence of drug education for all groups from year to year.

At the time of the second census (1998/99), just over half of the secondary schools and 73% of primary schools indicated that they do not intend to implement any major changes to their drug education within the next two years.

■ School drug education aims and policies

Primary and secondary schools continue to share the same main aims for their drug education. Almost all schools see these aims as being:

- the provision of accurate information on drugs as a basis for informed and responsible decision-making
- the promotion of pupils' decision-making skills.

Relatively few respondents claim to possess specific written policy statements on their drug education (21% of secondary and 16% of primary schools). A higher proportion, however, report that their wider health education policies incorporate drug education (60% of secondary and 56% of primary schools) or that they are currently formulating more specific policies on their drug education (38% of secondary and 33% of primary schools). The Scottish Office currently accepts that a policy on drug education can be at the level of shared understanding. While there has been no significant increase in the number of secondary schools possessing written policies on drug education, the number of primary schools with policies has doubled from 8% to 16%. Rather than generate their own policies, most schools are aware of their local authority health education and drug education policies and use them to inform their own practice (88% of secondary and 86% of primary schools). Perhaps more surprising is that less than half of the secondary schools and 16% of primary schools have written policies concerning dealing with incidents of drug misuse among pupils.

■ Drug education resources

Appendix 5 provides an overview of the range main resources used by primary and secondary schools in Scotland. Over the period of the research, most Scottish drug education has continued to be based on *Drugwise* and TACADE resources (85% of secondary and 98% of primary schools include components of these resources in their drug education in 1999). However, this does not result in a standardised approach or methods for drug education as most schools customise and adapt their main resources and use a wide array of supplementary resources. Teachers select particular elements in line with their perceptions of the needs and abilities of their pupils. Some of the secondary school responses to the later census reveal that the *Drugwise* materials are beginning to date, particularly *Drugwise Drug Free*. Despite this criticism, almost all primary and secondary schools report finding the *Drugwise* resources useful.

The rationale for primary and secondary schools' current selection of materials and resources are shown in Table 4.

Table 4: Reasons for selecting drug education resources given by respondents to the 1999 census

Reasons for selecting resources	**Primary** % (n=80)	**Secondary** % (n=143)
Suitability of resource for pupils' needs and abilities	23	25
Availability of quality resources	12	12
Awareness of appropriate resources	2	2
Concern over local drug situation	11	10
Resources seen as promoting pupils' self-esteem	4	8
Reflects the views of pupils	1	5
Reflects the views of teachers	6	5
Recommended by Local Authority	11	5
Linked to teachers' skills	4	5
Miscellaneous others	26	23

Both primary and secondary teachers choose resources primarily in order to meet their pupils' needs and abilities as perceived by the teachers and also to respond to the local drug situation. However, both the availability of resources and the preferences of the local education authority can be important factors, the latter more so for primary teachers. Other factors include whether resources are congruous with teachers' and pupils' own views, teachers' skills, and whether or not the resources are considered likely to promote pupils' self-esteem.

Staff development for drug education

Although drug and substance misuse have increasingly become matters of public concern, most teachers who provide drug education in primary and secondary schools have not received relevant training on this topic in the past two years. In secondary schools, guidance teachers are the most likely to have been trained in drug education. Table 5 provides the proportions of teachers receiving drug education training by type of teacher. It also shows evidence of the relatively high proportion of schools without any teachers with recent training in drug education.

Table 5: Proportions of teachers receiving drug education training in past two years

		All	**about 75%**	**about 50%**	**about 25%**	**None**	**n**
Senior Management Team	Secondary	10%	4%	10%	18%	58%	108
	Primary	12%	–	26%	11%	51%	66
Other teachers of drug education	Secondary	24%	9%	11%	14%	42%	110
	Primary	11%	2%	11%	11%	65%	55
Senior/Guidance teachers	Secondary	30%	8%	20%	12%	29%	129
	Primary	NA	NA	NA	NA	NA	NA

Perceived impact of training

Overall, secondary and primary teachers report very similar perceptions concerning the usefulness of their training. As Table 6 shows, most teachers claim the training in which they participated improved their levels of knowledge about drug misuse, promoted their confidence to teach drug education and promoted their skills in teaching drug education (proportionately more secondary teachers than primary).

Table 6: Teachers' perceived impact of staff development on drug-teaching skills

Impact on teaching drug education	**Primary** % (n=108)	**Secondary** % (n=110)
Promoted knowledge about drugs	95	96
Promoted confidence to teach drug education	72	90
Promoted drug education teaching skills	79	83

Further staff development needs

Census data shows that both primary and secondary teachers value drug education training and believe ongoing staff development is required to keep pace with drug culture developments and advances in drug education approaches. Teachers' perceived training needs are shown in Table 7.

Table 7: Teachers' perceived training needs (1999 census)

	Primary % (n=277)	**Secondary** % (n=311)
Regular in-service on effective drug education and methods	59	53
Update knowledge of drug facts	8	29
Advice on suitable materials	2	3
More co-operation with external agencies	8	8
More teachers to be trained in providing drug education	23	7

As in the previous census, primary teachers want to provide more systematic drug education to younger pupils but see their priority as obtaining practical guidance on how best to provide drug education to these year groups. A substantial percentage of secondary teachers still feel the need for more factual information about drugs.

In both the 1997 and 1999 census we found (see Table 8) that those primary and secondary schools with formal written policies on drug education are more likely to provide training for teachers in this area.

Table 8: Association between the school having a formal policy on drug education and training of teachers to provide drug education

		Formal school policy %	**No formal school policy** %
Trained teachers of drug education in past 2 years	*Primary (n=280)*	29	15
	Secondary (n=312)	46	33
No training of drug education teachers in past 2 years	*Primary (n=280)*	23	35
	Secondary (n=312)	16	33

School monitoring and evaluation of drug education

Three-quarters of the 318 secondary and half the 284 primary schools providing information about their drug education reported that they evaluated their drug education. This is a very marked increase over the first census findings in 96/97, where only 10% of secondary and 4% of primary schools claimed to evaluate their drug education.

In the most recent census, schools report that evaluation is almost completely based on internal evaluation of drug education conducted by teachers involved with this subject. Relatively few schools (12% and 14% of primary and secondary schools respectively) engage pupils in the actual development of their drug education or deploy systematic pupil feedback in evaluation and planning. However, almost all primary and secondary schools claim to draw on day-to-day teacher and pupil informal feedback when reflecting on their school's drug education.

In both the 1997 and 1999 census we found that those primary and secondary schools with formal written policies on drug education are more likely to conduct monitoring of their drug education.

Table 9: Association between formal policies on drug education and monitoring (Census 1999)

	Formal school policy on drug education and monitor drug education %	**No formal school policy on drug education and monitor drug education** %
Primary (n=284)	76	34
Secondary (n=318)	80	66

Working with external agencies

External agencies are seen by schools as an important source of advice and training in drug education. Our second census findings revealed the same pattern of responses as the first. Table 10 shows that the police are the most commonly used service which has a training and teaching input in school drug education (71% of secondary and 68% of primary schools). Local health boards and drug agencies are the next most commonly used sources of support (38% of secondary and 44% of primary schools). Both the police and health agencies are highly valued by teachers.

Table 10:Sources of external support for drug education (Census 1999)

	Secondary schools % (n=318)	**Primary schools** % (n=284)
Use local health authority		
– to train teachers of drug education	34	18
– provide parts of drug education	38	45
Use local drug agencies		
– to train teachers of drug education	19	8
– to provide parts of drug education	37	22
Use police		
– to train teachers of drug education	23	26
– to provide parts of drug education	71	68
Use nurses/doctors		
– to train teachers of drug education	4	16
– to provide parts of drug education	30	21

When interpreting some of the responses in Table 10, it is worth noting that in a number of health promotion departments in Scotland there is a clear policy not to go into the classroom with pupils, but work with the teachers to improve their skills.

■ Drug education provision: summary

Over the duration of the project, there is a notable increase in the proportion of primary schools providing drug education to P6 and P7. Over the same period, provision for other year groups has remained static or slipped slightly.

In the secondary schools, drug education is treated as a discrete topic predominantly for S1 to S3. Drug education for S4 onwards appears to be integrated into other PSE topics.

Another apparent shift in the nature of drug education in Scottish schools is the increase in schools claiming to evaluate their own drug education (75% of secondary schools and 51% of primary compared with 10% of secondary and 4% of primary schools in 1997). This suggests that the profile of drug education in schools' planning has risen with schools now placing more emphasis on monitoring this education. What is not clear is how schools use this information to improve their drug education provision to meet the needs of pupils but the potential to do this has certainly improved.

4 Pupils' Substance Misuse & Attitudes

The focus of this section is a comparison of pupils responses in 1997 and in 1999. Differences between pupil groups in terms of their drug-related knowledge, attitudes and behaviours are highlighted and explored. A complex longitudinal analysis of shifts in the behaviours of those individuals tracked over the course of the project is the focus of the next chapter. In comparing pupils in P6, S1, S3 and S5 from 1997 with their 1999 counterparts (age-stage analysis) there was:

- no significant change in attitudes, knowledge and behaviours concerning illegal drugs
- little change in the proportion of S1, S3 and S5 who report smoking tobacco at least once per week
- a slight decrease in the proportion of S3 and S5 who report drinking something alcoholic at least once per week. A slightly higher proportion of S1 pupils reported drinking something alcoholic at least once per week.

It must be emphasised that substance misuse is a complex issue. While significant proportions of young people will experiment with certain substances it does not follow that they will necessarily develop frequent use of these substances or develop problems related to their use. Figures which simply report the levels of substance misuse can be alarming. Therefore it is necessary to understand the complexities of substance misuse if useful responses are to be developed.

Smoking

Across all pupils surveyed, while smoking increases with age a lower proportion of those who have tried smoking go on to smoke regularly. In 1999 of the 57% (131) of secondary pupils who tried smoking, 32% (152) of these went on to smoke regularly. This is 13% of the secondary pupils regularly smoking tobacco at least once a week. Tables 11 and 12 provide figures for the different year groups.

Table 11: Incidence of pupils smoking in 1997

	P6 % (n=1156)	S1 % (n=1137)	S3 % (n=1147)	S5 % (n=1179)
Ever tried smoking	20	35	61	67
Smoke tobacco at least once a week	2	4	13	16

Table 12: Incidence of pupils smoking in 1999

	P6 % (n=776)	S1 % (n=131)	S3 % (n=459)	S5 % (n=325)
Ever tried smoking	14	28	57	63
Smoke tobacco at least once a week	3	4	13	19

We can see from Tables 11 and 12 that while notable proportions of young people may try or experiment with smoking, far fewer actually go on to smoke regularly. Between 1997 and 1999 there was little change in the numbers of pupils who reported regularly smoking. In 1999, 3% of P6, 4% of S1, 13% of S3 and 19% of S5 pupils reported smoking tobacco at least once week.

Those secondary pupils who report regularly smoking, smoke between 1 to 10 cigarettes per week. But the S3 year group is more likely to smoke greater volumes per week (20% of S3 smoking between 11 to 20 cigarettes a week compared with 12% of S1 and 14% of S5).

There is a noticeable gender difference when we look at the secondary pupils, with more girls than boys claiming to smoke (62% of regular smokers are girls compared with 38% boys). These findings correspond to similar patterns in our first survey of pupils (60% girls in 1997). As we shall see, those pupils claiming to use illegal drugs are also far more likely to smoke than those pupils who do not use drugs (72% compared with 28%).

Alcohol

Alcohol use across the sample is greater than the use of any other substances with 92% (847) of pupils in the 1999 secondary pupil survey claiming to have tried alcohol and 68% (622) of these claiming to drink alcohol regularly. Therefore, in comparison with smoking patterns, fewer pupils have given up alcohol after trying it. Reported regular alcohol consumption (drinking something alcoholic at least once a week decreased slightly over the period 1997 to 1999. In 1999, 13% of P6, 17% of S1, 47% of S3 and 75% of S5 pupils reported drinking something alcoholic at least once week.

Table 13: Incidence of pupils' drinking in 1997

	P6 % (n=1094)	S1 % (n=1042)	S3 % (n=979)	S5 % (n=997)
Ever tried alcohol	35	53	80	92
Drink something alcoholic at least once a week	15	26	59	81

Table 14: Incidence of pupils drinking in 1999

	P6 % (n=718)	S1 % (n=131)	S3 % (n=459)	S5 % (n=325)
Ever tried alcohol	32	32	75	90
Drink something alcoholic at least once a week	13	17	47	75

In comparing the figures from the 1997 and 1999 surveys, fewer pupils in 1999 report trying alcohol and also continuing to use alcohol compared with pupils in the same age group in 1997.

Like smoking, alcohol consumption increases with age, with 75% (81% in 1997) of the S5 pupils claiming to drink regularly. There are gender differences: according to these surveys. Boys start to drink at a younger age than girls. However, among the secondary pupils, more girls than boys claim to drink regularly (57% of girls compared with 43% of boys). This is the same pattern as observed in our 1997 survey. Boys report that their favourite alcoholic drinks are lager and beers and, perhaps unexpectedly, fortified wines. Girls prefer alcoholic lemonades and spirits.

■ Illegal drugs

The surveys of pupils in 1997 and in 1999, found that the incidence of pupils' reported drug misuse across the year groups was similar to that of other comparable surveys (for example SAD 1996). As one might expect, levels of drug misuse in P6 are extremely low – 1% of P6 report using cannabis, 1% claim to use amphetamines and 2% claim to use inhalants. All other illegal drug misuse reported by the P6 group fell below 1%. Appendix 4 presents tables illustrating the percentages of those pupils reporting trying and regularly using illegal drugs in 1997 and in 1999.

Research conducted by others (McKeganey 1998) since our first survey indicates possible increases in primary pupils' use of certain drugs, such as heroin. However, our second survey has found no evidence of a new pattern of drug misuse by primary pupils or dramatic rise in P6 illegal drug misuse nationally. For example, we found that only three P6 pupils of the 718 surveyed in 1999 report using heroin. However, it must be noted that this is a survey of a generalisable population and that the patterns of misuse for certain substances in particular localities in Scotland may well be different from the overview presented in this study.

The majority of the secondary pupils surveyed say they do not use illegal drugs. However, 23% (260 of 1119) of the secondary pupils we surveyed in 1999 claim to use them (a similar percentage to the 97 survey) although most of this consists of cannabis smoking. Of these pupils 47% are male and 53% are female. For S1 pupils, substance misuse was only marginally higher than that of P6 pupils. Use of illegal drugs, mainly cannabis, becomes notable in the S3 and S5 year groups (see Appendices 4a and 4b).

In looking at the figures from the first and second surveys, there appears to be only slight fluctuations in percentages. Overall there are slight reductions in experimentation and misuse of illegal drugs from 1997 to 1999, but such small differences are not significant.

Pupils who misuse illegal drugs

For those pupils who claimed to regularly misuse illegal drugs, the most common drug is cannabis, (5% of S1, 12% of S3 and 23% of S5 in 1999). Around 2 to 3% of secondary pupils report using inhalants, magic mushrooms, amphetamines and synthetic hallucinogens (LSD). In the case of inhalants, use among S3 pupils is slightly greater than for S5 and use of LSD, magic mushrooms and amphetamines is the same. The use of amyl-nitrate (not illegal) was also around 2% for S3 and S5 pupils.

Of those who report using drugs (263 secondary pupils in 1999), 29% (76) report using two or more drugs at the same time. Respondents interpreted the question as including substances such as alcohol and tobacco. The most common reported drug combinations are cannabis and alcohol. Amphetamines taken with alcohol appear to be the next most common combination. It is not clear how aware these pupils are of the increased risks of combining such substances.

In both the 1997 and 1999 surveys, analysis of responses from users of cannabis and especially of those using 'harder' drugs reveals a profile of disaffection and alienation, chiefly with school. This is particularly the case with male users. Analysis of those pupils who frequently use illegal drugs suggests they are typically:

- more likely to drink and smoke than those not using illegal drugs (see Tables A1 and A2 in Appendix 3)
- more likely to have friends who drink, smoke and misuse illegal drugs (see Tables A3, A4 and A5)
- more likely to report being drunk 'lots of times' (22% of drug users compared to 2% of non users)
- negative towards school generally (see Tables A6 and A7) and its drug education (see Table A8)
- depressed by school (see Table A9)
- less likely to see illegal drug misuse as wrong and more likely to believe it is beneficial (see Tables A10 and A11)
- more likely to find it difficult to refuse drugs if they are offered (see Table A12)
- anxious about school work and performance (see Tables A13 and A14). However, boys using illegal dugs are less likely to be concerned
- more willing to skip school if they get the chance (see Table A15)
- more likely to feel they are not respected by teachers but are respected by their close friends, who share similar characteristics and views (see Tables A16 and A17)
- less likely to feel a part of their school (see Table A18)
- less likely to report getting on well with parents (see Table A19)
- less likely to do sports at school (see Table A20)
- less likely to feel safe at school, yet do not report being bullied (see Table A21).

One difference between our '97 survey and the '99 survey was that in the original survey boys are more likely to use cannabis. In our later survey we find girls are slightly more likely than boys to use cannabis (53% of users of cannabis are female compared with 47% who are boys). However, boys are more likely to use so-called 'harder' drugs and are more accepting of drugs. Multiple drug misuse appears to be associated with levels of dissatisfaction and alienation, with boys being more disaffected than girls.

Pupils' reasons for misusing illegal drugs

In the 1999 survey, 263 pupils reported misusing illegal drugs (this was mainly cannabis). The main reason given for misusing illegal drugs is 'to feel good' (69%), followed by boredom (30%) and to forget about problems (28%). These figures are similar to the 1997 survey findings. Most pupils in the surveys including those misusing drugs, generally have high levels of self-esteem in terms of feeling respected by peers (See Table A17 in Appendix 3). The majority of S5 pupils (79%) and 59% of those in S3 had been offered illegal drugs (usually cannabis). Thirty seven percent of S1 and 25% of P6 pupils had also been offered illegal drugs. However, the majority of pupils who claim to have been offered illegal drugs state that they are not pressurised to take drugs and can resist attempts by others to make them take drugs (79% n=554). Yet a proportion of the S3 and S5 pupils report that they sometimes find it hard to refuse drugs (13% of S3 and 15% of S5 compared with 7% of S1).

Do users of illegal drugs want to alter their use?

Both surveys (1997 and 1999) show the same proportions of young people wanting to alter their drug use. Of those misusing illegal drugs, 29% say they would like to stop using them, 20% say they would like to use less but the majority (50%) do not want to change. Those who misuse illegal drugs were asked what would help them stop using drugs. The most common response was if one of their friends got seriously ill from using drugs (56%). Other responses were: *if more leisure activities were available* (31%), *knowing more about the health risks involved* (21%) *and the chance to get a decent job* (16%). However 14% of those misusing illegal drugs claimed nothing would help them to stop their use.

Of the 1119 pupils followed up from the first survey, and who were still at secondary schools, 14% (162) claimed they would be using drugs at the same time next year, 67% said they would not and 19% did not know whether they would be misusing illegal drugs. This suggests that 33% of these young people would particularly benefit from appropriate drug education.

Where do pupils get illegal drugs from and where do they use them?

Most drugs are acquired from close friends. Pupils are more likely to accept substances from these friends and other close sources such as brother/sister and boy/girlfriends than from classmates, people at parties, clubs, dealers and strangers. Those misusing illegal drugs do so at numerous places with the most common being: outdoors (57%), at friends' houses (50%), at parties (46%), and 11% claim to use them at school.

Very few of those claiming to misuse illegal drugs do so outside a social activity. Only 1% claim to use drugs on their own. Far more commonly, illegal drugs are misused when with friends (79%).

Pupils' knowledge about substance misuse

In contrast with some other studies (SAD 1996), our study has found that those pupils misusing drugs scored consistently and significantly higher in terms of their knowledge about substance misuse facts. From a bank of true or false questions about illegal drugs, smoking, alcohol, and risk and legality topics, those who misuse drugs were more likely to answer correctly than those who did not use drugs. It is possible that experiential sources of information and learning about drugs have promoted their knowledge, or they have a vested interest in obtaining information (including from school lessons).

There were only two exceptions to users' better scores on substance misuse knowledge. The first was on the statement *'smoking cannabis is perfectly safe'* – more non-users answered correctly (that this is untrue). We could speculate that this response suggests that cannabis smokers are in denial about the effects of their chosen drug. The other exception was from responses to the statement *'it will be all right to drive a car on the morning after a heavy drinking session the night before'*. Here, the majority of non-users and misusers were unsure of the correct answer.

On a positive note, it is somewhat reassuring that the misusers do have relatively high levels of knowledge about substance misuse and this might help them reduce some of the risks they might face. However, there is some cause for concern given their belief that cannabis smoking is perfectly safe.

Attitudes towards illegal drug misuse

The pupil surveys in 1997 and 1999 found that most pupils, and especially those in P6 and S1, are opposed to the use of drugs but older pupils possess more tolerant attitudes towards cannabis. In 1999, 26% of S3 (n=113) and 46% of S5 (n=141) stated that 'It is OK to use cannabis'.

Substantial numbers of S3 pupils believe cannabis should be legalised, with a small decrease since 1997 in the proportion of pupils holding such views (45% in 97, 41% in 99) and S5 (55% in 97, 52% in 99). In our group interviews, older pupils (S3 and older) claimed the use of cannabis was similar to the way they perceived that adults used alcohol; they did not see themselves as drug users. For these pupils, cannabis use was less harmful to them and to society. Furthermore, they perceived dual standards operating concerning cannabis. For example, alcohol use (a drug with serious health implications) is legal for over 18 year-olds and cannabis (also a drug but with perceived lower risks) is illegal.

Perhaps not surprisingly, those pupils reporting illegal drug misuse possess more tolerant attitudes towards drug misuse than those who do not use illegal drugs. Misusers are more likely to perceive drugs can help them cope with problems and that those who use illegal drugs can lead normal lives (See Tables A11 and A24 in Appendix 3). Misusers are less judgmental about friends who might use drugs (A22) and are less likely to see illegal drug misuse as wrong (A23). Most do, however, add that the issue depends on the types of drug involved (Table A25). Users of illegal drugs are also less likely to claim they would intervene to stop any of their own children from using drugs (Table A26 in Appendix 3).

■ Pupils' views on drug education

The 1999 and earlier 1997 pupil surveys reveal that most pupils value their drug education. However, the most critical pupils are usually in S3 and S5 and those who are using drugs. Older secondary pupils claim they are bored and frustrated by much of the drug education provided, particularly when it does not tell them anything new and does not reflect their perceived needs. Qualitative aspects of our project indicate that there can be some mismatch between teachers' accounts of the extent and nature of drug education provided and the pupils' perceptions of what they have experienced. For example, there are sometimes instances where pupils challenge their teachers' description of the content, methods and even frequency of the drug education they are supposed to have been taught. It is not clear why this should be but possible reasons for this could be simply differences in recall, or perhaps the pupils are less aware of drug education content when it is integrated into other health and social topics in PSE and other subjects.

The 1999 survey highlights that those reporting using illegal drugs are more likely than non-users, to state their drug education has not told them anything they did not already know about drugs (39% compared to 19%). However, 22% of users state their drug education has told them quite a few things they did not already know about drugs.

In both the 1997 and 1999 pupil surveys, the findings reveal that, despite criticisms of current drug education by many older pupils and particularly from those claiming to use drugs, most of these groups feel that their drug education has had some beneficial impact. Table 15 illustrates these pupils' claims.

Table 15: Illegal drug users' perceptions: reported impact of their school drug education

Views on the impact of drug education from pupils who claim to use illegal drugs	**1997 survey** % (n=629)	**1999 survey** % (n=263)
Drug education has helped me to use drugs more safely	42	38
Drug education has helped me to reduce my use of drugs	19	18
Drug education has helped me to stop using drugs all together	4	10
Drug education has had no influence on my drug use	31	34

The 1997 and 1999 figures confirm that about two thirds of self-identified users of illegal drugs perceive that their drug education has had an impact on their drug misuse behaviour, an impact most would agree is a positive one.

Pupils' perception of their drug education needs

Pupils provided information on what type of drug education they would ideally like. There were many similarities in responses across the year groups. Pupils wanted a mix of teachers and visitors to teach drug education and, overwhelmingly, pupils wanted individuals who had experienced drug misuse to be invited to talk in drug education lessons (79% of P6 pupils and 91% of all secondary pupils). The use of such individuals in school-based drug education is often resisted by local authorities and criticised by some commentators on drug education and we look at this issue again in Chapter 6.

Primary six pupils were generally happy to talk about drugs in class with any type of adult whether they were teacher, police, doctor or health worker. The same generally applied to all secondary pupils with the exception of the S5 year group and those claiming to use illegal drugs. Just over half of the S5 pupils were wary about discussing drug issues in class with a police officer. Users of illegal drugs were also wary about talking to doctors and nurses.

There was great similarity across all pupils' responses when asked to comment on what an ideal drug education programme should entail. In order of priority, the pupils' responses were:

- lessons which have a lot of facts on drugs
- lessons which let others express their views
- lessons which have a lot of discussion about drugs
- lessons which show pupils how to make their own decisions about drugs.

■ Pupils' use and attitudes towards drugs: summary

The findings from the 1997 and 1999 pupil surveys reveal:

- substantial levels of alcohol use, particularly among older secondary pupils (75% of S5 pupils report drinking something alcoholic at least once a week)
- a slight decrease in the proportion of pupils who report drinking something alcoholic at least once per week. A slightly higher proportion of S1 pupils reported drinking something alcoholic at least once per week
- no significant increase in the proportion of S1, S3 and S5 who report smoking tobacco at least once per week. However, more girls than boys report they smoke tobacco at least once per week
- no significant change in attitudes, knowledge and behaviours concerning illegal drugs.

It is clear that most pupils surveyed do not misuse illegal drugs and very few misuse illegal drugs other than cannabis. Use of other substances, particularly alcohol is much more notable and this is especially the case for older secondary pupils. Pupils' attitudes to illegal drug misuse are also similar across the two surveys, with most pupils holding negative views towards the use of illegal drugs. This shifts somewhat as pupils get older and they become more tolerant of cannabis misuse. Perhaps not surprisingly, those misusing drugs possess more accepting attitudes toward illegal drug misuse.

Our study indicates that those misusing illegal drugs are alienated from school and possibly aspects of wider society. These pupils report negative attitudes towards school, claim to be respected by friends and possess high self-esteem but are unhappy with school and, to some extent, family. This group seem to pose a particular challenge for school-based drug education, given the apparent range of their disaffection and the fact that they already perceive school with negative connotations.

The pupils' voice about relevant and appropriate drug education has emerged from the surveys. Older pupils (S3 onwards) are more likely to be bored and frustrated with drug education, Most pupils, not just users of illegal drugs, want to talk and listen to those who have experienced drug misuse.

5 Factors Influencing the Effectiveness of Drug Education

In the two preceding chapters we have seen the results of our analyses of data gathered by the project concerning: (a) description of the nature and extent of Scottish drug education in schools (the census) and (b) an overview of pupils' behaviours and perceptions concerning illegal drugs, tobacco, alcohol and their drug education and any shifts in these over the duration of the project (pupil surveys). In this chapter we look at the pupil data again and data gathered from their teachers about the nature of their drug education and school to address the third main aim of our project: (c) to identify factors which contribute to effective drug education in schools in terms of changes over time in pupils' knowledge, attitudes and behaviours.

Originally, before our census of drug education in Scottish schools highlighted that there was no clear differentiation in terms of the approaches used, it had been envisaged that this project would look for associations between distinctly different drug education approaches and any shifts in pupils' reported drug related behaviours, attitudes and knowledge. However, it became clear from the census analysis that drug education is remarkably similar in terms of the aims, resources used and general guiding philosophy. Rather than using particular drug education approaches, it appears schools are providing drug education content within the PSE framework and which fits broadly within the current UK health education/promotion philosophy. This is most closely associated to the life-skills approach.

This finding meant it was impossible to compare distinct approaches. From our ongoing review of the literature as part of this project it was clear that effective drug education was characterised by certain criteria which are now frequently appearing in published guidelines for drug education (for example, Howie 1997). Therefore, we decided that the analysis would look for changes over time in the tracked pupils' behaviours, attitudes and knowledge and look for any associations with aspects of their school drug education which related to criteria identified by others as typifying good practice. The hypotheses being that one would expect to find impacts on drug behaviours, attitudes and knowledge in those schools which possessed drug education in line with the ideal criteria.

Using regression analyses (see Appendix 1 for details) the relevant data were examined for associations between pupils' behaviours, attitudes and knowledge over the duration of the project and key variables which might influence the pupils.

Therefore, our analyses of the longitudinal data focused on:

Pupil variables

- attitudes to drug misuse
- knowledge about drugs

- tobacco/cigarette use
- alcohol use
- soft drug misuse (i.e. cannabis)
- hard drug misuse
- sex of pupil.

School variables

- percentage of Free School Meal Entitlement (FSME %) for the school
- the proportion of those trained in drug education in the school
- denomination of school
- variables based on measures of the quality of the school's drug education programme, derived using the descriptive information gathered on the survey school provided by appropriate teachers and classified using available HEBS guidelines (Howie 1997) and relevant literature covering the principles of good practice. Our analysis included: whether participative teaching methods were used; whether pupils needs were assessed, the range of resources used; whether the drug education was monitored; and whether the school possessed a co-ordinator for drug education
- a measure of the pupils' self-esteem with a particular reference to their perception of self within their school.

Our information on those pupils tracked from 1997 to 1999 combined with information gathered about the drug education provided for them allowed complex analyses of certain factors which influence the effectiveness of school-based drug education. However, it is important to note here that while our analyses have utilised a range of relevant data, the practical limits of the research design means that detailed information about family and certain community factors is minimal. The literature on effective drug education highlights such background factors as important. Therefore, it must be remembered that in addition to those factors we have identified there will be other important influences on the effectiveness of drug education provided by schools.

■ Findings from the longitudinal analysis

No significant relationship was identified between the outcome variables (pupils alcohol, smoking and illegal drug behaviours, their attitudes and knowledge) and school denomination, the numbers of teachers trained to provide drug education, nor the variable based on our typology of schools for either cohort (S1→S3 or S3→S5). In addition, pupil sex showed no significant relationship. However, percentage of free school meal entitlement (FSME %) for schools was significant for some outcome variables. The variables that were significant in one or more regressions are summarised below.

When the six outcome variables for 1999 (see above, i.e. attitude to drug, knowledge about drugs misuse / various substance use) were regressed on the same variables for 1997 the relationship in all cases was positive, i.e. above average standing in 1997 was related to above average standing in 1999. This actually means that, in effect, there was little significant change in the variables over the period 1997 to 1999. The only exception is the case of cigarette use where there was a notable increase in 1999.

Self-esteem

The variable based on measures pupils' self-esteem with particular reference to their school context was relevant in several cases, but not all. The relevant cases are shown in Table 16.

Table 16: Association of self-esteem with key variables

	S1 → S3	*S →S5*
Attitude	yes	yes
Knowledge	yes	
Cigarette use	yes	yes
Alcohol use	yes	
Soft drug misuse	yes	yes
Hard drug misuse	yes	yes

Therefore, in the period 1997 to 1999 positive self-esteem is associated with:

- a pro-drug attitude
- for S1→ S3 only, less knowledge about drugs
- a greater use of cigarettes, cannabis, and use of all other illegal drugs
- for S1→ S3 only, increased alcohol intake.

Careful interpretation is required here. The majority of the pupils using illegal drugs in our surveys were using mainly cannabis and claimed that their use was 'recreational' and in their eyes manageable. Those using so-called 'harder' illegal drugs held similar attitudes although they did possess more negative attitudes towards school than non-users. Therefore, our research is most likely looking at 'non-problematic' drug misusers. Any individual who is experiencing real problems as a result of their misuse or other interrelated social and personal problems is not likely to be in school and so covered by school survey methods. Therefore, we can hypothesise that, if the surveys had contained substantial numbers of problematic illegal drug misusers. There might have been more of a correlation between self esteem and such misusers.

Free school meals entitlement

The percentage of free school meal entitlement for schools as a factor was significant in the regression of attitudes at S3→S5. Schools with higher rates of free school meal entitlement (i.e. used as an indicator of greater socio-economic deprivation) were associated with pupils with pro-drug attitudes.

Participative teaching methods

After our quality of drug education variable (based on guidelines for good practice and rated against criteria identified in the literature as desirable in quality drug education) failed to show any association, it was thought possible that this composite variable, was masking some of the effects of the individual criteria. Regression analysis of the individual elements of our 'composite' variable revealed only one significant factor or element: an association between participative/interactive teaching methods and a reduction in pupils' reported alcohol consumption.

Participative and interactive teaching methods have been cited in the literature as having an effect on health behaviours and related attitudes and knowledge (Coggan *et al* 1999, Tobler and Stratton 1997). Interactive methods are characterised by those which stimulate active participation of all pupils in the classroom activity and by those who also carry out substantial amounts of discussion, brainstorming sessions, role-play and pupil participation rather than a reliance on worksheets and passively watching or listening to presentations. Our classification of these programmes were limited in terms of defining the nature of the content (see summary below). Tobler and Stratton 1997 suggest participative approaches also require particular content (they suggest 'drug refusal skills') to impact on pupils' health behaviours.

■ Analysis of factors influencing effective drug education: summary

Our research has highlighted some important factors influencing the effectiveness of school-based drug education. Pupils' self-esteem is a complex factor and teachers/drug educators cannot assume that those misusing illegal drugs and other substances will necessarily possess low self-esteem or poor self-image. This finding also has implications for the teaching approaches and content of drug education.

Participative teaching methods also appear to be important in promoting effective drug education. We found an association between such methods and reducing alcohol use. Given that our research and others (Todd *et al* 1999) reveals the relatively high proportions of secondary-age young people who drink alcohol, the possibility of particular methods could impact on such use seems worth more detailed study. If one listens to pupils, as their responses in our survey questionnaire demonstrate, they prefer participative methods. It is perhaps not surprising, then, that education which is based on their needs will stand more chance of being valued by them and potentially will influence their perceptions and behaviours.

Our findings on the impact of free school meal entitlement on substance use and attitudes suggests that schools with proportionately higher levels of pupils eligible for free school meals face particular challenges in influencing pupils' health behaviours and challenges. This is not a new finding. The links between levels of socio-economic status and health are well established. However it reminds us that continued efforts are required to devise appropriate strategies to support schools to better meet the needs of such pupils. This could include targeted initiatives for such schools. Also, it may be a matter of debate whether promoting the standard of life in the communities where these schools are situated will enhance prevention of drug misuse.

Our overall research design, which had to address numerous aims, meant that potentially important factors such as pupils' family and community influences could not be directly included in the analyses. Also the 'resolution' or level of detailed information about each pupil's school and its drug education that can be gathered and utilised is limited is such survey work. Nevertheless our research has been able to highlight some important factors influencing drug education.

6 Issues and Questions

Our recent drug education research findings suggest that there are various unresolved dilemmas for debate.

Teaching drug education to younger children

Our qualitative work and census information reveals that teachers can feel uncomfortable about working with younger children in drug education. In particular, where drug education is more closely defined to refer principally to illegal drugs, some teachers are uneasy to embark on this topic before P6/P7. Teachers report they require training which helps address discussing illegal drugs with younger primary pupils. Various resources and materials (such as the HELP resource) exist to provide a framework and guidance for teachers to identify appropriate content and approaches for each year group. However, there still appears to be a need to provide training to help primary teachers utilise existing resources and build on their skills to teach drug education to younger primary pupils.

Teaching methods in health education

From our findings and the wider literature there is evidence to suggest that participative/interactive teaching methods offer potential to influence health behaviours in young people. The literature suggests that these methods work best when used with particular content. Therefore, there are implications for current teacher practice and initial and inservice teacher training.

Teachers' confidence and competence to teach drug education

Because drug education is frequently equated with education about illegal drugs (and not alcohol, tobacco, inhalants) many teachers perceive they have a lack of knowledge and experience in this area especially compared to pupils in a different generation and reared in a culture relatively familiar with drugs. However, a relevant question is the extent to which teachers need to undertake the role of expert, as might be expected in a transmission model of teaching, rather than fostering pupils' own understanding through mutual exploration of issues concerned with drug education, as just one aspect of health promotion. The potential impact of staff development programmes such as the Scotland Against Drugs Primary School Initiative might provide some indications of the way forward in improving teacher confidence and competence in teaching drug education.

Teachers' professional and legal framework

Are teachers' anxieties about lack of knowledge to some extent concealing stress about the ambiguity of the teachers' role and their legal position? Teachers' particular professional and legal framework differs considerably from many agencies and services working with young people in the area of health. A clearer recognition of the limitations of teachers in providing aspects of health education such as drugs and sexual health could help reduce teacher anxieties and allow drug/health education networks to design better systems which reflect the capacities of each partner.

Policies on drug incidents

To date, only about half of secondary schools and fewer than one in five primary schools report having a policy which supports staff in coping with the ramifications of an illegal drug or alcohol incident at school. There is evidence that many schools are working with their local authorities in this matter to develop policies. Nevertheless, the importance of having such policies in place is clear and at the time our data was collected schools wanted support from local authorities and other relevant bodies in working towards appropriate policies. The recent publication of guidelines on drug incidents by the Scottish Drug Safety Team would seem to be of direct relevance and support in this matter.

Differing values

Differences in values espoused at school and in pupils' own cultures and in their families can become especially apparent in drug education and other aspects of health education. Drug education which is sensitive to such issues will better meet the needs of those experiencing it.

Using external services

Issues do arise about the extensive use of external services. Schools are most appreciative of the help provided by health agencies and police in particular. While this support gets around the legal dilemmas alluded to above, it may perpetuate teachers' own reluctance and perceived vulnerability in taking the lead in drug education. Moreover there may be problems with ensuring external contributions are coherent with each school's own philosophy and planned curriculum. Our research reveals a very high percentage of pupils want someone who has experienced drug misuse to talk to them as part of their drug education. Many schools and local authorities might be apprehensive about such input. However, it is reasonable to suggest that, as with any external input to school-based drug education, former drug misusers can contribute as long as they are part of a planned, coherent programme and reflect its philosophy.

Schools' monitoring of drug education

Although not a dilemma as such, it is clear from our research that schools are increasingly likely to adopt some form of monitoring and evaluation of their drug programme. This is positive news as, without detailed information about pupils' needs, the basis for effective drug education is weakened and credibility suspect.

Differing messages in drug education

Some schools' drug education conveys a consistent message about all substance misuse. However, other schools' teaching can present different, often implicitly conflicting messages for alcohol, smoking and illegal drugs. Pupils can often pick up on these inconsistencies and question the credibility of the content.

Addressing pupils' alcohol use

The prevalence of alcohol use among the young people surveyed suggests that efforts to address alcohol use and related issues should have some prominence. The current emphasis on illegal drugs often means the levels of underage drinking are overlooked.

The pace of change

Our census findings suggest that teachers are willing to adopt good practice in drug education but the pace of change can be slow as schools introduce enhanced drug education to coincide with their School Development Planning cycle.

The need for further research

Ongoing monitoring and evaluation of drug education

The situation concerning the extent and nature of drug education in schools has not changed a great deal in two years. However, given recent developments in policy and the increase in training initiatives it is possible that more significant changes will occur. There is a need, therefore, for ongoing monitoring and evaluation of progress.

Innovative approaches

School drug education finds it difficult to meet all of the needs of all of the children, especially those who are more vulnerable. Recent research suggests partnerships between schools, health agencies and the community are more likely to meet the needs of such young people. However, there will be researching, networking and operational framework issues to address. Research which looks in detail at the processes and outcomes of innovative initiatives in drug and holistic health education is warranted.

Effective teaching methods

We need to know more about the potential of participative/interactive teaching methods, particularly: what components work best, what content is required to enhance their effectiveness; what circumstances do they work best in; and what skills are required by teachers/educators to effectively use these methods?

What do teachers need to provide drug education?

Initial teacher-training appears to overlook preparation of teachers to deliver effective drug education. This suggests that without appropriate support and training it is unreasonable to expect teachers to cope in this area. There is therefore a strong argument for regular inservice development related to drug education. Future research could explore and identify ways in which teachers have been successfully supported in providing drug education. This might include input at initial and inservice stages and involve collaboration with a range of services outwith schools.

Effective alcohol education

Given the levels of reported alcohol use among young people highlighted by our study, there is some urgency in promoting studies which focus on the factors which underlie such use and measures which can impact on alcohol use.

Supporting parents

How can parents best be involved and supported in the field of drug education?

Research fatigue

Schools in the UK are increasingly being surveyed by research organisations, HE departments, local authorities and government. Health-related projects seem particularly common. This research often requires the assistance of teachers and takes up their time in administering questionnaires or arranging other research activities. Consequently, research fatigue among schools is growing with response rates for surveys falling to levels where representative samples could be compromised.

7 Towards Effective Drug Education

While most young people are not involved in the use of illegal drugs, the patterns of use of alcohol, tobacco and cannabis among older secondary school pupils can be seen as a cause for concern. The research findings highlight the difficulty in developing drug education programmes which suit the needs of all pupils. Drug education has the extremely difficult task of tailoring the content and approaches to the wide range of pupils' needs and experience. A strong theme emerging from our research is that policymakers and practitioners need to recognise that drug education is not solely the responsibility of schools. There are limits to what schools can achieve in terms of influencing health behaviours given the other influences on pupils' lives and decision-making.

The limitations of school-based drug education can be addressed, to some extent, by working closely with relevant services and organisations in the community who also aim to meet the needs of those pupils with particular drug misuse problems. Raising pupils' awareness about sources of local support and information is another area schools could develop in meeting pupils' needs. The issue of how well school-based drug education prepares young people for decision-making about health after leaving school and how it articulates with health promotion available post-school is worth considering.

It is also important to recognise that effective drug education has much to do with the attitudes and confidence or vulnerability of the teacher. Teachers involved with drug education have to be committed, willing, volunteers and share the aims of their school's drug education programme. Also, if teachers feel positive about their own ability to make a difference to pupils' lives and in so doing, demonstrate care and commitment towards their pupils then the overall ethos will be enhanced for effective learning.

Recent Scottish drug strategy (HMSO 1999) highlights the continuing importance the government places on building effective measures to address drug misuse. Our research shows that there is a basis on which to build an effective, yet realistic, drug education component into government strategies. For example, we have found that many of those pupils misusing illegal drugs believe their drug education has been beneficial to them despite also seeing it as limited in terms of meeting their needs.

Our research also indicates that participative teaching methods show some promise in influencing health behaviours of pupils. This requires further research to explore the impact of such methods and examine under what circumstance such methods can have longer-term effects.

School-based drug education, therefore, has the potential to affect drug behaviours especially if it builds on what we already know about effectiveness in drug education.

Appendix 1: Samples, Methods and Analyses

Survey and census samples

In both the pupil surveys and school census the aim was to obtain data from which generalisable and representative findings could be obtained. A national database of Scottish schools held by SCRE was used to select representative samples for the quantitative aspects of the study.

While the response rates for the first phase survey and census were lower than those hoped for, using feedback from schools, cross-checking findings with similar representative surveys indicates that the schools and young people participating are not atypical. In the case of the pupil surveys, enough pupils were followed-up from the first phase to allow useful analysis to highlight comparisons between the same age-groups and longitudinal analysis of tracked pupils (particularly S1 to S3 and S3 to S5). The researchers therefore, believe that the samples and methods are robust enough to ensure the findings are generalisible.

Methods

The census of drug education in Scottish schools.

The census questionnaire was designed to elicit mainly descriptive overview information about the extent to which schools were providing drug education for particular year groups and the nature of this education. For example, what resources and teaching methods were used and the extent to which teachers were trained.

Both closed and open-ended questions were used to gather the necessary information. The questionnaire was quite lengthy and detailed and this, combined with the high level of other research approaching schools for information, meant that a lot of effort was required to obtain respectable response rates. In the second phase of the project the census also used an abridged version to collect essential information. This was sent out to those schools who did not respond to the first mailing and reminders. This strategy greatly improved the final response rate and strongly indicates that teachers are increasingly only likely to respond to brief questionnaires. The census questionnaires were completed by headteachers and those teachers responsible for drug education.

The pupil surveys

The first survey collected data from 1470 school pupils from P6, S1, S3 and S5 cohorts selected from a representative sample of Scottish schools. This provided information on the current state of young people's views, knowledge and behaviour concerning drugs. It also detailed some of their perceptions about their drug education and summarised their drug education needs. A national database of Scottish schools and their characteristics held by SCRE was used as a sampling frame from which a representative sample of schools was drawn. Within each school one class from the desired age group was selected at random and asked to complete the questionnaire.

In 1999, the study followed up as many pupils as possible and this formed the second survey. The attrition rate on our sample was high but enough pupils were tracked to allow useful analysis, particularly for those who had progressed from S1 to S3 and those going from S3 to S5.

The pupil survey questionnaire was long (20 pages). It had to gather much descriptive information as well as data on attitudes and respondents' perspectives. It was a mainly simple tick box style but with a number of open-ended questions to allow pupils to provide additional information using their own terms and expressions.

The content of the questions and style reflected the research questions but was also influenced by the need to maintain some comparability with other similar studies. This would allow comparisons of findings and give some measure of how generalisable the projects' findings were. Also, the questionnaire and survey design guides of Selitz, Wrightsman and Cook (1976) and that of Hoinville and Jowell (1978) proved useful in constructing and administering the questionnaires. Nevertheless, it was a concern that many pupils would find the questionnaire too long, get bored and not complete it. This was not the case, and almost every questionnaire that pupils started was completed.

The sensitive nature of the topics covered in the research meant that pupils had to be encouraged to complete their questionnaires honestly. The provision of an envelope in which pupils could place their completed questionnaires immediately upon finishing, seemed to promote pupils' honesty in their responses. Our piloting of this approach and discussions with pupils indicated that pupils welcomed the privacy provided by the envelopes. Nevertheless, it is clear from returns that some pupils still felt wary about providing their name despite assurances about confidentiality and envelopes for their questionnaires. In general, the questionnaires successfully provided a wealth of information on pupils' drug-related behaviours, attitudes and knowledge and basic details on drug education needs.

On a critical note, the fact that questionnaires by their nature require respondents to be able to read and write fairly competently mean that certain pupils with literacy difficulties might have had difficulty providing information. Moreover, because the questionnaire was administered in school, it might not have been able to access certain groups of young people who are often absent and who, the literature suggests, are more likely to have social, emotional problems and be particularly at risk from drug misuse.

The qualitative work

The qualitative aspect of the project entailed group interviews with pupils and teachers in 2 primary and 4 secondary schools and provided detailed information on:

- young peoples' perceptions of drug use and their awareness of drug issues and facts
- how pupils construct their understanding of drugs and what sources of information they draw on
- the role drugs play in pupils' lives
- pupils' perceptions of their drug education
- pupils' perceived drug education needs.

In each of the two primary qualitative study schools, two group interviews consisting of eight pupils were conducted to gather information from the P5, P6 and P7 year groups. In each of the four secondary case study-schools, two group interviews of about eight pupils were conducted to gather information from the S1, S3 and the S5/6 year groups. In each school, one group interview of key staff who teach and are responsible for drug education was also conducted.

The group interviews were facilitated by the interviewer using a semi-structured schedule. This schedule was based on the main research questions and those issues arising from the survey work which required further clarification. This approach provided a framework for questions but was not static in that it also allowed the flexibility to pursue emerging issues relevant to the research foci but which were unforeseen when designing the schedule. During the interviews important themes which pupils and teachers raised but which could not have been originally anticipated were pursued.

■ Analysis

Census data

In the census of Scottish drug education provision, the analysis sought to describe the extent of drug education occurring in Scottish primary and secondary schools; what resources were being used; what factors influenced the type of resources and drug education adopted; and what training was undertaken. Potential differences between schools on the basis of primary and secondary sectors, pupil numbers, denomination and location were examined.

SPSS was used to explore the data and obtain descriptive frequencies. This provided an overview of drug education in Scottish schools. Then cross-tabulations were used with chi-square significance tests to examine any associations between variables.

Survey data

Analysis of the contextual survey data was also conducted using SPSS. In the pupil survey, the analysis focused on the differences and similarities between young people in terms of their attitudes, knowledge and behaviours concerning drug use as well as their reported drug education needs. The relationships between these variables and with characteristics such as age, sex and peer associations were examined using cross-tabulations and chi-square tests.

Initial frequencies of responses to the questions helped identify particular areas which required further analysis, including looking at the relationship between variables. Cross-tabulations were run with Chi-square tests to assess the significance of any relationships between variables.

Longitudinal analysis

The pupils who were tracked from 1997 to 1999 were also analysed using regression approaches. Data were available for longitudinal analyses of two cohorts of pupils 313 in 20 schools who moved from S1 to S3 over the period 1997 to 1999 and the other for 220 pupils in 21 schools who moved from S3 to S5 over the same period. For these pupils, two sets of identical regression were completed

Given the high attrition rate over the period 1997 to 1999 concerning obtaining follow-up data from those moving from P6 to secondary school and for those S5 leaving school, no analyses were done for these pupils.

Six outcome variables were studied in each set of regressions. These were the 1998/99 measures of:

- Attitude to drug misuse
- Knowledge about drugs
- Tobacco/cigarette use
- Alcohol use

- Soft drug misuse (i.e. cannabis)
- Hard drug misuse.

We used seven factors for which we possessed data and that were considered as possibly influencing each of these outcome variables. Four of these were school-level variables, and three were pupil-level.

School level

- Denomination of school
- Percentage of free school meal entitlement (FSME %) of the school
- The proportion of drugs-trained teachers in the school
- Variables based on measures of the quality of the school's drug education programme, derived using the descriptive information gathered on the survey school which was provided by appropriate teachers, was classified using available HEBS guidelines (Howie 1997) and relevant literature covering the principles of good practice. Our analysis included: whether participative teaching methods were used; whether pupils needs were assessed; the range of resources used; whether the drug education was monitored; and whether the school possessed a co-ordinator for drug education.

Pupil level

- Sex of pupil
- The 1996/7 corresponding measure of the outcome variable
- A measure of the student's self-esteem with a particular reference to their perception of self within their school.

The regressions used the multi-level programme of Goldstein *et al.*

Qualitative analysis

The analytical approach used in the qualitative strand of the research approach can be summarised as a thematic scrutiny of the information, using the research questions as a flexible framework. This allowed points relevant to the foci of the study to emerge as appropriate. The group interviews were tape-recorded and then summarised under the research question headings and analysed for relevant themes. Insights about the processes involved in each group interview were obtained from the journal-style notes kept by the interviewer. These insights also informed the analysis and interpretation of interview material.

The analysis of the qualitative information used categories which reflected the research questions and which were used in the interview schedule. Salient findings emerging from the survey work and issues relating to the field of study (highlighted in the literature) were also used. This analysis allowed for new but relevant categories to emerge from the interview data as the analysis proceeded. The analysis categories therefore, were a mix of those relating to the researcher's agenda but also to participant's concerns and agendas which emerged from their comments.

The information was summarised and explored using these categories to illuminate themes across all of the data and, where appropriate, those relating to certain groups. The resultant findings allowed statements to be made, some of which were descriptive. Other findings possessed an illuminative and explanatory capacity. While the qualitative findings are not generalisable to the extent that those emerging from the quantitative survey findings are, their strength lies in providing insights into how the pupils and teachers made sense of drugs and drug education in their lives. This information helps identify some of the processes at work which promote or inhibit drug education in its attempts to meet the needs of pupils.

As with the quantitative analysis, the qualitative analysis was a cyclical process. Themes emerging from the group-interview information were used to confirm or challenge findings already established and to look for new associations. This analysis process was informed by previous experience and useful texts on qualitative research and analysis.

Appendix 2: Drug Education Context and Approaches: A Review of the Literature

This review is part of a Scottish Council for Research in Education (SCRE) project commissioned by the Scottish Office Education and Industry Department (SOEID). The project focuses on the extent of drug education in schools, pupils drug-related behaviours, attitudes and knowledge. It assesses the factors influencing the success of drug education. This review informs the main SCRE project but also stands as a resource in its own right. For that reason, allusions to the preceding report are referenced (Lowden and Powney 1999). After setting the context by highlighting patterns of substance use and misuse among young people, the main part of the review draws together findings emerging from the literature on the effectiveness of drug education approaches. The review covers literature mainly from the last two decades but does include some references from the 1970s when it is necessary to consider key socio-psychological theories which underpin the drug education approaches.

■ 1: Tackling the review

1.1 Definitions

Drugs and substances: The scope of the review includes substances such as alcohol, tobacco, and the wide range of materials including illegal drugs and volatile substances seen to have associated health-related effects and risks.

Drug and substance use and misuse: Definitions of drug- -use vary and are notoriously problematic. Terms such as drug misuse, drug- -abuse, recreational drug use, experimental drug-use and problematic drug-use are used. It is often difficult to separate many of the definitions of drug-use from various value stances which underpin them. This review does not enter into the debate about misuse or abuse, rather, for the purposes of clarity this review adopts the terms 'drug-misuse' when referring to the use of illegal drugs. The term 'substance misuse' is adopted when referring generally to the range of materials such as alcohol, tobacco, inhalants and illegal drugs which can induce changes of a mental and/ or physical nature. These definitions are comparable to those used by the Scottish Office.

Drug education approaches: The review has included literature which focuses on education approaches designed to impact on young people's health attitudes, knowledge and behaviours concerning substance use and misuse. In defining teaching approaches we decided to look at the overall educational approach used on programmes rather than specific teaching methods (such as discussion groups and role play). This allows for a better understanding of the rationale and overview of the approaches used. However, where information could be obtained about the use and value of certain teaching methods this was included.

To have concentrated solely on particular types of teaching methods would also have been limited in value because such methods can be employed within different educational approaches and adapted to suit the ethos of that particular approach. As we shall see it is often the case that it is not the teaching approaches alone which affect the success of a programme but also the underlying theory of the approach which is being applied and the complex interplay of factors including social, educational and personal variables.

This review, as in the majority of similar reviews on effectiveness in drug education focuses on the main approaches, but it is also sensitive to relevant details concerning specific teaching methods in drugs education.

1.2 Scope of the review search

Initially, the review was to look at literature which had been produced over the past two decades. However, in discussing the development of educational approaches in this field and the corresponding key evaluations it became necessary to include work from the 1970s. Given the remit and focus of the review the following key words and combinations were used for the search:

- drugs education, prevention
- health education/promotion
- alcohol, tobacco, illegal drugs
- substance use/misuse, drug use/misuse
- teaching approaches
- evaluation, research
- secondary schools
- primary schools
- Scotland, England and Wales, Europe, USA.

The sources of information included:

- major educational research bibliographical databases and printed directories in SCRE and educational libraries including:
  - ERIC USA and International (containing UK, Canada and Australia)
  - Educational Research in Scotland Database (ERSDAT)
  - HEBS Health Promotion Library Catalogue
  - HEBS journal database
  - British Educational Index
  - Register of Educational Research in the United Kingdom (NFER)
  - press-release database
  - current research in Britain – social sciences.
- key professionals co-ordinating drugs education, those researching drugs education and those working in the field of drugs education including regional drugs officers and health-promotion teams and national drugs agencies
- varied internet sources such as Scottish Office Website, International Bibliography of the Social Sciences.

■ 2. The context for drug education

2.1 National policy and drug education

Over recent years illegal drug misuse in Scotland and the wider UK has been seen as a serious problem and has continued to be a priority area for action by both the previous and current governments. Cumulative government initiatives relevant to Scotland include: the Ministerial Task Force set up in 1994 and the subsequent Scottish Office publication of *Drugs in Scotland: Meeting the Challenge, Report of the Ministerial Drugs Task Force* (1994); the creation of the Scotland Against Drugs agency (March 1996) and, most recently, the introduction of a drug strategy in Scotland: *Tackling Drugs in Scotland: action in Partnership* (1999). This last development is set against the government White Paper *Tackling Drugs to Build a Better Britain* (1998) and builds on the earlier Ministerial Task Force and other developments since 1997. The *Tackling Drugs in Scotland* strategy aims to adopt a multi-faceted approach to 'challenge the drug culture' and reduce drug misuse as well as to limit the negative health and social effects of drug misuse at all levels of society.

At the same time as increasing political interest in challenging substance misuse a number of educational strategy documents (Advisory Council on the Misuse of Drugs 1993, DfEE 1995) and publications on good practice in drug education have emerged, the latter often derive guidelines for effective drug education from the empirical work done in this field (Standing Conference on Drug Abuse 1999a, 1999b, 1998, Howie; 1997).

The Drug Action Teams throughout Scotland are the cornerstone of the current government strategy. Reporting annually to government, they are tasked with leading and co-ordinating initiatives to tackle drug misuse. Measures to challenge drug misuse and associated problems are seen as requiring active collaboration between relevant agencies, including schools. The idea is that such partnerships of agencies adopt a 'shared but focused agenda' and will 'contribute in their different ways to achieving the required outcomes' (*Tackling Drugs in Scotland* 1999).

In recent years, HM Inspector of Schools have produced reports on health and drug education which offer guidance to schools and indicate while much is being done in drug education there is still much more that could be achieved.

In November 1999, new draft Guidelines for the Management of Drug Incidents have been issued which aim to support schools in developing policies and procedures concerning drug incidents. These guidelines have been formulated by the School Drug Safety Team which comprises of representatives from health, education and police. The team will be looking next to address wider issues in school-based drug education, particularly promoting good practice.

The current government strategy recognises the links between illegal drug misuse and wider substance misuse, particularly smoking and alcohol use and the complexity of issues related to drugs but focuses mainly on illegal drug misuse. Other government initiatives are being developed to address smoking and alcohol issues (the White Paper *Smoking Kills* and a National Alcohol Misuse Strategy for Scotland are key parts of such efforts).

2.2 Drug education in the curriculum

The subject of health education and with it drug education in Scottish schools has become more prominent over the 1990s. The Scottish Executive requires all schools to provide drug education and to have welfare policies for managing drug-related incidents (as set out in *Tackling Drugs in Scotland. Action in Partnership* 1999). Also Coggans *et al* (1999) stress the importance of formal policies to address drug misuse:

> the government's ten-year strategy for combating drug misuse emphasizes the role of life-skills education, starting in primary school, and the importance of integrating such programmes within pastoral, social and health education (PSHE) in schools (HMSO 1998).
> Coggans *et al* (1999 p 27)

Drug education is usually addressed as a topic within the Personal and Social Development strand of the curriculum. In 1991 *Health Education in Scotland: A National Policy Statement* (Scottish Office Home and Health Department) identified health targets and described health education for schools. The Scottish Office publication *Scotland's Health, A Challenge to Us All: A Policy Statement* (1992 HMSO) highlighted the complex and interrelated physical, social and mental factors influencing health. Then, in 1993, schools were seen as having an important role to play in promoting health with the introduction of the 5–14 national guidelines for Environmental Studies. These guidelines emphasise health education as an important part of the school curriculum. The underlying philosophy or model of these guidelines is one which stresses self-esteem and empowerment as central to health promotion and 'incorporates skills development, value clarification as well as the development of knowledge and understanding' (Forrest 1999). The guidelines also reflect an awareness of the links between an individual's health and their environment. Within the Environmental Studies guidelines, the *Healthy and Safe Living* component and other parts help teachers develop health education. Currently, the 5–14 Environmental Studies guidelines are not fully implemented, but as Forrest notes:

> schools are using a number of subject areas to address health issues. Generally, social education incorporates aspects of health related to, for example, alcohol, tobacco, drugs, relationships and sexual behaviour. (Forrest 1999 p 502)

Forrest also points out that such topic-based health education can obscure rather than highlight the connections to be made between aspects of health behaviours (for example, it would be useful to authorities and individuals to understand more about the relationship between alcohol and sexual behaviour). However, she claims that schools are increasingly moving towards a genuine cross-curricular approach to health education. Such provision fits in with the health-promoting school model but poses challenges for school management to ensure curriculum co-ordination and integration for health content. Other opportunities to provide health-related content exist such as short courses in Health Studies (implemented in 1988 for S3 upwards as part of the Standard Grade) and, for post-sixteen provision, the Higher Still programme facilitates personal/interpersonal skills and some health input.

The Scottish Office and (what was called in 1995) Strathclyde Regional Council Education and Industry Department, produced the Health Education for Living Project (HELP), a resource which teachers can use to develop a health education programme for all stages from pre-five to S6.

Writers such as Forrest (1999) highlight that, while much progress has been made in providing health education within the curriculum, challenges such as meeting the needs of pupils and addressing the skills and concerns of teachers (such as conflicting values and issues of pupil disclosures) to meet such needs still require attention.

2.3 Young people and substance misuse

Reviews of the literature on drug-use and drug education (for example, Dorn and Murji 1992, Barnard and McKeganey 1994, Coggans and Watson 1995) conclude that despite various drug education and prevention approaches both at school (curriculum-based programmes) and in society generally (mass-media campaigns) there has been a steady increase in the acceptance of drugs by users and non-users as 'a taken for granted facet of youth culture' (Coggans and Watson 1995). However, the older pupils' attitudes towards drugs are more liberal and individualistic and less in line with adult opinions on drugs, with 24% of the pupils in S4 saying illegal drug-use was a normal part of growing up compared with only 10% of pupils in S1 (Scotland Against Drugs 1996).

Numerous national surveys, routine data sources and expert reviews reports (for example, Health Education Board for Scotland 1997; Balding 1995) conclude that, until very recently, the incidence and prevalence of illegal drug misuse in Scotland has been steadily increasing.

However, the latest surveys reveal no change or a slight decrease in illegal drug misuse among secondary school age pupils in the last two years (Todd *et al* 1999; Lowden and Powney 1999). The only exception to this is the increase in the proportion of 15 year old girls reporting ever using cannabis and the increase in the proportion of 13 year old girls reporting using magic mushrooms in the previous four weeks (Todd *et al* 1999).

Most recent surveys reveal that cannabis is the most commonly used drug with around 31% of 13 to 15 year olds reporting having tried this substance between 1994 to 1999 (for example, Todd *et al* 1999). After cannabis, the misuse of other illegal drugs falls off steeply, with the next most commonly consumed drugs being amphetamines, amylnitrate, natural and synthetic hallucinogens and solvents. Only 1 to 2% of teenagers have tried heroin or cocaine (HEBS 1997, Lowden and Powney 1999, Todd *et al* 1999).

It is important to note that research reveals that most school-age young people do not take drugs. A notable proportion of these young people, however, do report trying drugs rather than using them. Drug use and misuse increases with age, peaking at 20 to 24 years. While less than 5% of 10 year olds have used drugs more than 50% of 20-year-olds report having used drugs. More than 25% of 15 to 30-year-olds report using drugs regularly (HEBS 1997). It is important to remember that by 'drug misuse' among young people these studies are mainly referring to cannabis use.

Therefore, misuse of illegal drugs, while presenting serious health and social issues, must be kept in perspective. Research on substance misuse shows that alcohol use among young people far surpasses the use of illegal drugs (Lowden and Powney 1999). Todd *et al* (1999) report that there have been significant increases in the proportion of secondary-school-age children reporting drinking something alcoholic at least once a week and a significant increase in 15 year old boys and girls and 13 year-old-girls reporting smoking tobacco at least once a week. The misuse of illegal drugs often makes media headlines while alcohol and tobacco use is often overlooked, yet the implications for health arising from alcohol and tobacco use are proportionately more serious than those for illegal drug misuse.

The most common reason given for taking drugs is pleasure and enjoyment (HEBS 1997; SAD 1996). In a study of S1 and S5 pupils, the mean amount spent on drugs by those frequently misusing illegal substances was estimated at £9.64 per week and those who used alcohol typically spent around £8.73 per week (SAD 1996).

It might be argued that of more concern to health promotion organisations could be the finding that polydrug misuse is seen as increasingly common among young drug users with about a third reporting multiple drug use (HEBS 1997). Most young people (43%) know where they can obtain cannabis and 34% know sources for ecstasy (West and Sweeting 1992).

The HEBS research (1997) reveals patterns of drug-use in Scotland are generally similar to that in England and Wales. Patterns of drug-use and misuse vary across localities and within cities but all of Scotland is affected (HEBS 1997; West and Sweeting 1992). There are areas of higher drug misuse particularly in urban areas. However, differences between urban and rural areas is becoming less pronounced (SAD 1996).

2.4 Social class differences and drug misuse

Interestingly, some studies show the use of cannabis and amyl-butyl-nitrates is higher in more middle-class areas in comparison to more working-class areas. Interpreting differences in drug use is difficult without more information but the higher disposable income among some groups of young people may facilitate their obtaining certain types of expensive drugs. Indeed, the SHARE (1998) study found that pupils who had access to above the median amount of spending money were more likely to have tried drugs. However, money is not the only factor. The SHARE (1998) study, also indicates that those pupils reporting below the median amount of parental protectiveness were also more likely to have tried drugs.

Other studies (for example, SHARE 1998) found that of the 38% of S3 pupils who reported getting drunk about once a month or more, proportionally more were from manual than non-manual backgrounds. Additionally, those pupils whose fathers work manually are more likely to have tried drugs than those from a non-manual background. However, this finding was not statistically significant for magic mushrooms and ecstasy. There appears to be little social class difference concerning smoking tobacco.

2.5 Gender differences in drug use and misuse

Generally, boys are more likely to report using drugs than girls and, with the exception of tobacco, females report lower levels of drug use (SAD 1996; SHARE 1998). However, this difference is not significant for solvents and ecstasy (SHARE 1998). More girls smoke tobacco than boys. In S3 and S5 girls are more likely than boys to smoke. Nevertheless, there is no significant difference between boys and girls in their levels of alcohol use (Lowden and Powney 1999).

Males are more likely to report negative experiences such as violence or arrest as a consequence of drug-use. Females were more critical of drug-use in general and were more likely to want more information on drugs (SAD 1996). Males not only seem to be more likely than females to use cannabis and harder drugs, they are more accepting of drug-use in general (Lowden and Powney 1999).

Drug-use patterns are volatile and liable to change. The findings of *The Scottish Crime Survey* (Hammersely 1994) which included data from 12–15 year olds, indicate changing patterns in drug use among young people in Scotland. For certain drugs (temazepam, amphetamines, LSD and solvents) and, in certain age-groups, girls were more likely than boys to have experienced the effects of these drugs. However, the patterns of drug use among 16-year-olds and over was more predictable, with increasing proportions of males to females reporting drug use. The study suggests that while, more girls than boys are prepared to experiment with some drugs at a younger age, their experimentation is short-lived.

2.6 Findings relating to drug users

The SAD survey (1996) found that young people using drugs report more positive than negative experiences of drug-use and claim to value the effects (internal properties) rather than the social advantage gained through their use. At first glance this seems at odds with some of the social-psychological reasons given for using illegal drugs. As indicated by the results, many of the drug approaches in use are based on social-psychological models which cite the main reasons for using drugs as 'group' factors which are related to maintaining or improving one's standing in the peer group. In other words, many drug education approaches are based on the assumption that drugs are used for their social role (their external properties) rather than their chemical effects.

The SAD survey (1996) is interesting in that it is one of few studies to look more closely at the differences between regular drug users, those who use them less frequently and others who do not use drugs. The study showed that regular users were less likely to want drug information and more likely to answer knowledge questions concerning legality incorrectly. These young people also reported more positive effects of drug use and gave reasons for their use based on the internal effects of the drugs rather than their potential social role.

Lowden and Powney (1999) found that most drugs are acquired from close friends. Pupils are more likely to accept drugs from these friends and other close sources such as brother/sister and boy/girlfriends than from classmates, people at parties/clubs, dealers and strangers.

Lowden and Powney (1999) also reveal that the use of drugs appears to be associated with levels of dissatisfaction and alienation, particularly with school. Boys are more disaffected than girls, more likely to use cannabis and harder drugs and are also more accepting of drugs. Frequent misusers of cannabis and especially of 'harder' drugs possess a particular profile. They were typically:

- more likely to drink and smoke than non-illegal drug users
- negative towards school generally and its drug education
- depressed by school
- anxious about school work and performance (especially girls)
- more willing to truant
- more likely to feel they are not respected by teachers but are respected by their close friends (who share similar characteristics and views).

2.7 Young people's knowledge of drugs

We have seen that a substantial proportion of young people claim to know where to obtain drugs. Pupils' knowledge of drug facts and issues has been found by certain studies (for example, SAD 1996) to be 'adequate'. Older pupils have a better knowledge of drug facts than younger pupils. However, notable proportions of young and older pupils still want more information on drugs (SAD 1996). The SAD survey found that school-based drug education was the main source of pupils' knowledge, although there were reservations about its credibility among older pupils whereas first-year pupils were less likely to look to peers for information.

2.8 Conclusions on drug-use and misuse among young people

It is clear that, until very recently, there has been a steady increase in drug misuse among young people in Scotland and that the patterns are broadly similar to those elsewhere in the UK. However, recent surveys reveal that drug misuse among Scottish school children has not increased in general terms over the period 1994 to 1998.

Most of the surveys cited in this review have consistently shown that cannabis is the most commonly used drug and only 1 to 2% of teenagers have tried heroin or cocaine. This highlights the fact that, while certain percentages cited by researchers and press may seem alarming, it is necessary to look at the types of drugs being used, the frequency of use and the amounts used. It is also important to look at the age groups concerned. Aggregating all types of drug-use together, and not discriminating between experimentation and regular drug-use can be unhelpful and sensationalist

Surveys reveal that, overall, drug misuse is more common among males (with the exception of tobacco). Some surveys show that, young women in S5 are more likely to report cannabis use than males. From data on where drug-use occurs, this group is more likely to use drugs at parties and places where 'recreational' use might be common. While areas of higher drug use are mainly in urban localities, there has also been an increase in rural areas. There are also some social class variations in drug-use with those young people from working-class backgrounds being more likely to use certain types of drugs. There appears to be a link between pupils' levels of spending money and their likelihood to experiment with drugs, with those who have the available money more likely to experiment. Parental influences are important factors in pupils' drug-use with those with parents exhibiting higher levels of 'parental protectiveness' being less likely to use drugs.

Of particular concern to health education and promotion are findings which indicate that there are high levels of alcohol use among school-age children and that polydrug misuse is increasingly common among young drug users.

As illegal drug misuse increased over the period 1960 to 1990, so too did the efforts of drug education to reduce or stop such use among young people. The next section looks at the different types of drug education approaches that have emerged in response to drug misuse and, despite the apparent failure of many initiatives and approaches to reduce drug misuse, the following section also examines what can contribute to effective drug education.

3. Drug education approaches and their effectiveness

3.1 Types of drug education approaches and their effectiveness

Research on drug education in schools (Coggans and Watson 1995; HEBS 1997) agrees that educational interventions have a key place in the prevention of drug misuse. However, there is vigorous debate about the value of various approaches to drug education.

Since the 1960s teaching and programmes in drugs education in numerous countries (particularly the USA, UK, Canada, Australia and many in Europe) can be seen to have consisted of, or have been influenced by, five main approaches. These are:

- *Information-based approaches* – those which concentrate on providing information about drugs and their effects
- *Life-skills and values-deficit approaches* – those which provide skills and values development to compensate for deficits in individuals' personal living skills
- *Resistance training* – those which focus on providing skills and personal strategies to help individuals resist and deal with external pressures, particularly from peers
- *Alternatives-based approaches* – those aimed at providing alternatives to drug misuse and altering the environment of young people often using other young people as the agents of change
- *Peer education approaches* – those which use young people's peers to influence and educate.

There has been some degree of overlap across the approaches. For example, peer-led and personal skills methods have been used in resistance training. There follows a summary of the various drug education approaches and an assessment, using available literature, of the merits and shortfalls of each approach.

3.2 Information-based approaches

Underlying philosophy

The main guiding theory for these range of approaches is that, by providing information on the harmful effects of drugs, people will abstain from using them.

Methods

The methods used have varied with each modification of the approach over time. The main methods usually involve provision of information on the effects of drugs through literature, video, mass-media and, in schools, teacher and/or peer presentation.

Critique

Information-based approaches have not had an impact on reducing the demand and use of drugs. Wragg (1992) argues that these approaches arose from a superficial reading of socio-psychological literature and misapplication of univariate psychological theories to a complex issue. For example, fear arousal models used within the information-based approaches have been seen as generally ineffective because the message has moral overtones and is not congruent with young people's subjective experiences – drug-use does not always lead to immediate and severe health problems.

While most information-based models (including ones which also use a peer-led methodology) are now regarded as having failed (Wragg 1992; Coggans and Watson 1995), it is less clear whether they have had an impact on harm minimisation as most evaluations did not address criterion (Dorn and Murji 1992). Carefully targeted harm-reduction information may have a use for specific groups of drug misusers. The provision of information is one aspect of facilitating informed decision making among young people concerning their health needs. However, information needs require to be identified through research with the particular group(s) concerned (HEBS 1997).

3.3 Life-skills and values-deficit approaches

Underlying philosophy

These drug education approaches are based on Problem Behaviour Theory (Jessor and Jessor 1977), Social Learning Theory (Bandura 1997) and the Stage Theory (Kandel 1980). The approaches hold that people require decision-making, self-esteem and particular values to avoid drug use and that those at risk lack certain social skills, are poor at interpersonal relations and posses low self-esteem. These 'deficits' in social competencies mean that individuals can have difficulties in resisting pressures including those to use drugs. Young people are seen as facing a confusing, often chaotic, world and drug-use is one way to alleviate stress and feelings of alienation. One could debate whether this is an accurate depiction of all youth or whether it reflects the views of those who promote the deficit approach. Nevertheless, the impact of the approach on drugs education and more generally on Personal and Social Education (PSE) has been considerable.

Methods

The methods used to teach this approach can be very varied and include presentation/lecture, worksheets, role-playing, video and discussion.

Critique

Life-skills and values-deficit approaches seem to be largely ineffective in preventing experimentation with drugs but they may inhibit people moving on to harder drugs. Generally, evaluations of the programmes which aimed to improve values, general life-skills and young people's self-esteem have 'produced inconclusive but generally discouraging results in relation to drug consumption' (Dorn and Murji 1992 p 16). Coggans *et al* (1989) in their large-scale evaluation of skills-based or personal deficit models of drug education in Scotland stress that there is no evidence that such drug education reduced either illegal or legal drug use, nor had it made pupils adopt a more anti-drugs attitude. Such approaches however seem better able to affect attitudes of pupils earlier in school life than when the pupils were older (Kearney and Hines 1980). Life skills programmes provided at primary school are possibly more effective in affecting potential drug behaviour because the young people have not yet formed specific attitudes and behaviours concerning drugs.

These approaches argue that if certain cognitive and social skills can be fostered in young people, 'correct' or healthy choices can be promoted. However, the assumption that drug use among young people is due to a deficit of key social competencies has been found to be questionable. No consistent evidence has been presented to show the relationship between such personal deficits and drug misuse (Dembo 1981, Coggans *et al* 1999, Reilly and Homel 1988).

Reviewers of drug education point out that the deficit models of drug education emerged out of the broader movement of social engineering:

> where social problems were defined in terms of inadequate integration of individuals, groups and families into the mainstream of social life, due to inadequacies which were located in those individuals/families/groups but which were open to expert remedy.
>
> (Dorn and Murji 1992)

In attempting to apply this position to drugs education there are major problems and as Palin (1987) notes:

> ... after a wide review of studies which make some claim to establishing a causal link between low self-esteem and drug-use, it is concluded that the evidence is weak, conflicting and methodologically flawed. Palin (1987)

Theoretically and empirically the 'deficit' model is weak. For example, not all young people who lack social skills become drug users and some who seem socially competent do use drugs. Rather, critics argue, other factors in the person's home, school or community can account for his or her behaviour (Rhodes and Jason 1990). People also take drugs because of their intoxicating and sensation-creating nature and not necessarily because the individuals lack social skills.

3.4 Resistance training and normative education approaches

Underlying philosophy

The theoretical basis underpinning this approach is largely based on behaviourist perspectives which argue that health interventions are most effective if they concentrate on the relationship between personality and environment. These ideas stem from the ideas of theorists such as Bandura (1997) and Perry and Jessor (1983). The individual is seen as at risk of being compromised by social pressure. Similar in some ways to the affective or social deficit approaches in that it is also concerned with external influences, this approach argues for a more direct method of reducing the strength of certain personality dispositions. It argues for an emphasis on the acquisition and mastery of key social skills which enable individuals to resist pressures which promote health-compromising behaviours.

Resistance training approaches argue that young people desire to be accepted and to appear more adult, seeking independence; experimenting in behaviours which could compromise their health is a manifestation of this desire to be different. Young people are seen also to lack a long-term view of consequences and their norms reflect this, consequently long-term risks are not understood. According to this perspective, teaching young people about the long-term risks of drugs is likely to be fruitless. Rather, what is needed is to promote defensive behaviours which can be quickly picked up,]retained and which relate to the person's present situation.

The resistance approach sees social pressure as being the major contributor to drug-use, with friends and peers, family, media and community all playing a potential role (Bukoski 1986). Educational and preventative measures, therefore, must identify sources of pressure, develop counter arguments based on short-term reasons and apply these arguments through interventions in a socially acceptable form. The outcome is intended to engender behavioural skills necessary to resist social pressures to take drugs. Targeting the young at an age before they experience health-compromising pressures is often advocated by proponents of this approach.

Methods

The actual teaching methods in resistance training concentrate on helping young people to identify health-compromising social influences and pressures. Sometimes such sources (for example advertising on smoking or drinking) are actively discredited. Then appropriate strategies are described and demonstrated. Young people are encouraged to practice these resistance skills using role-play. Assertiveness training is given to further promote their resistance skills. The aim is not only to provide resistance skills but also promote self-belief so that the young people will have the confidence to use these skills. Role-play is seen as particularly important in providing a simulation of the pressure situations young people may experience.

Critique

Resistance training and normative education approaches have been used more in the USA than in the UK. The actual success of resistance training and normative education appears debatable.

Normative education, the other aspect of the overall resistance approach, addresses the fact that much drug-use and indeed smoking and drinking, is based on the view that their use can be seen by some groups as normal and therefore acceptable. As a result, the strategy of normative education is to challenge such views. Young people are seen as often overestimating the use and acceptability of drug-use among their peers. Normative education will use credible information about actual use (often at local level) to challenge young people's views and to 'reinforce prevailing conservative norms' (Dorn and Murji 1992).

Some of the literature contends that there are indications that resistance training and normative education approaches are more effective than knowledge-based and skills-deficit approaches (Polich *et al* 1984; Botvin and Dusenbury 1989; and Hansen 1990). Some programmes based on the resistance-training approach which appear to have been effective include those applied in schools with high numbers of racial minorities. Many of the resistance training programmes have focused on reducing smoking. However, Ellickson and Bell (1990a, 1990b) advise caution in interpreting such apparent effects. Many of these programmes have been carried out at a time when wider societal attitudes are beginning to turn against smoking, therefore it is almost impossible to assess which factors have really reduced smoking rates. The effect of wider societal influences and norms on behaviours do appear to be at least as, if not more, important than resistance training in affecting the use of certain substances. This can be seen with the use of alcohol which appears to be least affected by resistance training programmes possibly because, as Ellickson and Bell (1990a) suggest, these programmes are most effective against the most socially disapproved substances and alcohol falls outwith such a category.

Most of resistance-training-based approaches have been implemented in the USA and have been, as Dorn and Murji (1992, p.22) point out, administered to a relatively 'narrow part of the school age population, principally white middle-class students; they have only recently been applied to Marijuana, and not at all for polydrug use or opiates'. They argue that more research is needed to determine the effectiveness of this approach. Coggans and Watson (1995) assert that the research on resistance training shows little evidence of positive outcomes; they state that peer pressure as a cause of widespread drug use is not supported by empirical evidence and that the underpinning theory of such approaches is fundamentally flawed.

3.5 Alternative-based programmes

Underlying philosophy

Alternative-based programmes refer to, and include, a range of programmes which share a common element: they emphasise the need to improve the social environment to reduce the attraction of drugs. In addition, they stress that participation by individuals or groups in community-based activities aimed at promoting health will help to reduce drug-taking. The assumptions underpinning this approach are that many motives exist for taking drugs but if people have access to fulfilling and stimulating alternative activities they will be less likely to use drugs. Cultural and social reproduction of certain beliefs, and material deprivation in some environments, has meant that the awareness of positive and healthy lifestyles is inhibited as are the opportunities to participate in healthy lifestyles. People are seen as taking drugs to feel better. Therefore, if greater satisfaction can be provided via alternative activities the need for drugs will diminish (Swisher and Hu 1983, Reilly and Hommel 1988). The alternatives-based approach stresses that drugs education programmes should incorporate an understanding of the relationship between young people and their social and cultural contexts. Community-based action, including mobilising peer groups into activity aimed at reducing the perceived negative aspects of youth subcultures, is seen as having the benefit of incorporating young people who may avoid school, agencies and institutions.

Methods

Rather than traditional methods, the alternatives approach utilises a wide range of strategies, initiatives and programmes which share a common element: they emphasise the need to improve the social environment to reduce the attraction of drugs. In addition, they stress that participation by individuals or groups in community-based activities aimed at promoting health will help to reduce drug misuse.

Critique

The success of the alternatives-based approach appears proportional to the complexity of the response and activities used. For example, the use of simple activities such as leisure pursuits will not affect drug use. Rather, broader community-based efforts which use an alternatives approach integrated with community development and support, may have an effect on reducing drug use (Gillis 1989). Such complexity makes evaluation of crucial components and factors likely to have affected drug misuse difficult. Tobler (1986) states that high-intensity and well-financed programmes seem to be the most effective with current users. Coggans and Watson (1995) suggest that the younger people are when they become involved in alternatives-based approaches the more likely they will be to build them into their adolescent and adult lifestyle and repertoire. Some are more critical of alternatives-based approaches. Silverman (1990) argues that such approaches may have a positive effect on self-esteem and improve interaction with the community but there is little evidence to suggest alternatives-based approaches reduce drug use. It would seem that, as some suggest (Coggans and Watson 1995; Dorn and Murji 1992), further research is needed to say conclusively which alternatives are more effective than others and, overall, how useful this approach is.

3.6 Peer-led approaches

Underlying philosophy

Peer-led approaches aim to use the interactions between peers, and the associated socialisation and influence, to promote health-related behaviours and reduce drug-use. Peer leaders are often seen as having greater credibility than teachers for young people (Botvin 1990).

Methods

Peer education approaches, are also used as method within other approaches such as resistance training. The primary method is to use young people (not necessarily the same age as the target audience) who are seen as credible in the eyes of the audience, to provide all or some of the teaching component.

Critique

The success of this approach is difficult to ascertain, perhaps due to the wide range of variations. Whether or not careful attention has been given to the criteria used to appoint a peer leader is one important influence on the effectiveness of this approach (Botvin 1990). The criteria for peer leader credibility should reflect the young people's views rather than those of teachers. Peer tutors should be good communicators, be unconventional but demonstrate responsible attitudes. Such people may often lack organisational qualities so some have argued that co-teaching approaches (peer leader and teacher) could be a solution (Botvin 1990).

Coggans and Watson (1995 p.14) point out that it is not clear 'the extent to which peer education strategies in themselves can counteract prior influences on young people which predispose them to develop drug-use problems'. They suggest that this approach may be more successful with those who have experimented with drugs but less so with those who are regularly using drugs or those who are likely to become problem misusers. In reviewing peer education approaches in health contexts, Milburn (1996) found that:

> much peer education has suffered from a lack of adequate evaluation. Consequently there is little detailed understanding about the processes involved in such interventions and a lack of clear evidence about their effectiveness.

Milburn also highlights the fact that the theoretical background to peer education is underdeveloped and the evidence for effectiveness of this approach is inconclusive.

■ 4. Drug education in Scotland: approaches and reality

Drug education in Scotland has become more established in recent years with the 5–14 Curriculum Guidelines including health education within Environmental Studies. Drugs are also discussed in PSE programmes and SQA and SCOTVEC courses. The Ministerial

Drugs Task Force Report *Drugs in Scotland: Meeting the Challenge* (SOHHD 1994) and specific school-based initiatives such as the Drugwise packages and the HELP resource have also influenced the context of drug education in Scotland. In practice, a plethora of materials and resources exist for teachers to use in their drug education with new resources and support continuing to be designed to assist schools with their drug education (for example, HEBS resources for the upper primary school).

Lowden and Powney (1999) found that Scottish schools possess a consensus about the main aims of drug education as advocated by most health promoting organisations (as summarised by HEBS 1997 p8). Schools generally claim to be providing drug education which offers information about drugs and their effects and the schools also attempt to facilitate the development of decision-making alongside general life-skills. Our research has found that Scottish schools provide drug education using a mix of various customised drug education resources within a framework informed by aims generic to much of health education in the UK, namely aims which facilitate informed decision-making concerning healthy lifestyles. This can be seen as broadly falling into the skills-based approach as covered previously in this review. However, the selection and use of drug education resources are largely shaped by teachers' perceptions of pupils' needs, teachers' attitudes to the aims of the drug education, teachers' awareness of what resources and support exists and staff development and school policies.

Therefore, it is often practical factors which shape the nature of Scottish (and indeed UK) drug education rather than any explicit health education theory or model. Lowden and Powney (1999) argue that without clear reference to models of effective drug education, or at least awareness of the factors influencing effectiveness, drug education will have limited influence on pupils' health-related attitudes and behaviours.

Lowden and Powney (1999) found that teachers' awareness of effective drug education approaches and the factors which influence them varies. The plethora of duties and roles which comprise teaching, access to staff development and the whole school context can limit the extent to which teachers have the time and flexibility to acquire the necessary knowledge and skills to deliver the type of drug education which meets the ideals of health promotion.

■ 5. Can effective drug education be a reality?

5.1 Factors influencing effective drug education

We have seen that evaluations of the five main drug education approaches have produced inconclusive results, with most approaches failing to meet expectations. Traditionally, these expectations have been high: to prevent drug misuse from occurring and to stop it where it has started. However, certain approaches when targeted or used with appropriate other approaches (multi-strand) have shown promise.

The literature suggests that for drug education approaches to be effective they have to be 'audience appropriate and based on methods which take developmental influences into account' (Coggans and Watson 1995). Others argue that drug education approaches should also possess realistic aims and objectives informed by what is known about the impact of programmes on knowledge, attitudes and behaviour (Goodstadt 1990).

School-based drug education can be effective in promoting healthier behaviours and attitudes but it has limitations. To this end, drug education should be integrated with other areas of school life and curriculum and other developments in the community. Reliance on education about drugs without support from the school, family, peers, and community will be ineffective (Goodstadt and Willet 1989). The whole school approach integrated with related community and wider media work is a necessary precondition for effective health education, what ever the focus (Coggans *et al* 1991). Current UK drug education aims to assist young people to make informed decisions (rather than telling them what to do) with the 'hidden' and formal curricula working together to produce an environment conducive to health promotion. Whole-school approaches are seen as having the potential to influence health behaviours. The whole school ethos including teacher-pupil interaction and values in the school will affect health promotion efforts. Whole-school health initiatives and drug education programmes also need to ensure sufficient time for staff training, planning, delivery and quality assurance and be accompanied by rigorous and appropriate evaluation (Coggans *et al* 1991; Coggans and Watson 1995; Forrest 1999).

With the apparent failure of many drug education approaches to meet expectations, some researchers have focused on the range of factors which can influence the effectiveness of drug education. Swadi and Zeitlin (1987) represent the views of many other evaluators in summarising these factors. They argue that educational programmes are less likely to be effective when they:

- give incomplete, inaccurate or incomprehensible information
- do not address the possible factors that may have a role in initiating experimenting with illegal drugs
- lack a clear and realistic objective
- use one isolated strategy. Substance abuse is likely to be 'multifactorial'. Several aspects of different strategies have shown some promise and combinations of these are less likely to fail
- use scare tactics
- are delivered in such a way that they seem to be imposed on the target audience
- are delivered by participants without adequate skill in dealing with adolescents
- are not an ongoing part of the school curriculum
- cannot be properly evaluated.

Coggans *et al* (1999) in their review of key issues in drug education with particular reference to school-based interventions highlight important points for the practical and theoretical issues for such education. They also draw out from the literature implications for good practice in the provision of drug education. They argue that, while most evaluations of drug education approaches indicate limited success, it should be borne in mind that many initiatives have been based on unrealistic expectations and these have been used to measure their success. Also, the methodological problems associated with evaluations of drug education have to be taken into account. Despite the problematic nature of implementing and evaluating drug education Coggans *et al* (1999) suggest that it is possible to identify elements of programmes that can have a positive effect and also devise guidelines for good practice.

Coggans *et al* (1999) suggest that, while care must be taken in implementing a life-skills approach in schools (the approach generally underpinning most UK PSE/PSD and school-based drug education) and that the programme used does not emphasise personal problems of individual pupils, such education and the life of the school in general can have positive outcomes:

> the personal, and competencies required to cope with the temptations and problems of life, including drugs can and should be fostered by all aspects of school life. (p 36)

On principles of good practice for drug education, Coggans *et al* (1999) remind us that HEBS have produced guidelines (Howie 1997) based on what has been learned about effective drug education. These are reproduced below.

- Identify needs in terms of drug-related knowledge, attitudes and behaviour
- Identify local patterns and prevalence of drug-use
- Identify a range of clear and realistic intervention objectives which relate to individual and community needs
- Identify a drug education approach/programme which is compatible with needs and intervention objectives as well as being feasible in relation to resources
- Clarify expectations of, and support from, stakeholders in the organisation and wider community
- Ensure that senior management and school ethos support realistic interventions
- Employ appropriate teaching and learning methods such as interactive and participative processes and avoid over-reliance on didactic approaches
- Ensure interventions are appropriate for developmental stage and are culturally sensitive
- Evaluate using realistic evaluation criteria that relate to realistic programme objectives.

5.2 The importance of teaching methods

The HEBS guidelines (Howie 1997) emphasise the importance of interactive and participative methods and other studies have also found that use of such methods can improve the likelihood of influencing health behaviours in young people (Tobler and Stratton 1997; Lowden and Powney 1999). In particular, the meta-analysis by Tobler and Stratton 1997 found that interactive programmes achieved significant changes in knowledge, attitudes and drug use. Non-interactive programmes affected only knowledge. The success of the interactive programmes was 'observed for all adolescents, including varied minority populations, and was equal for tobacco, alcohol, marijuana and illicit drugs' (Tobler and Stratton 1997). Lowden and Powney found schools that used more interactive and participative approaches (including role-play and discussions) had an impact on reducing alcohol use among school pupils.

5.3 Lessons from the USA

Evaluations of drug education in the USA have produced interesting findings about effective drug education but care must be taken when applying recommendations relating to the education system and culture of one society to another. Bearing this in mind, a review of effective drug education programmes by Evans and Bosworth highlights US research findings on factors deemed to affect the success of drug education. Evans and Bosworth (1997) summarise the findings of other US-based research to identify factors which are important in creating effective drug programmes in that society. These are:

- prevention programmes need to be tailored to the age of the student as drug-use behaviours, perceptions and perspectives about drug use are sensitive to one-year changes in age
- programmes should proactively challenge pupils' views on drug use and this is most effective before fifth grade as after this time attitudes and perceptions are far more difficult to alter
- peer education approaches can be useful as peer leaders can add credibility to a programme and their presence can alter perceived norms concerning drug-use

- the involvement of families and community in drug education programmes can increase the likelihood of their effectiveness and promote longer-lasting results
- 'programme extensiveness and programme stability' are the two aspects found to be most linked to positive outcomes for students (Silvia and Thorne 1997). However, these factors are affected by level and continuity of funding
- the importance of resources and key people in schools and their authorities who are responsible for co-ordinating and implementing drug education are also crucial factors in effective drug education
- schools have to ensure an appropriate match between what drug education resources and programmes are available and the needs of the pupils. Such selection requires someone in the selection process who is specifically trained in substance abuse prevention theory and practice and who is familiar with drug education and prevention literature
- educators are advised to keep in touch with local education authorities and relevant academics to help with their choice of drug education content and approach
- lectures and one-way communication are seen as ineffective in drug education; therefore, educators also have to be trained in interactive teaching methods such as role-playing, small group activities, brainstorming, simulations, co-operative learning and class discussions.

Although there is much common ground between factors identified by Evans and Bosworth's (1997) and Howie's (1997) principles (for example that programmes should reflect pupils' needs and should utilise interactive teaching methods), the American advice still often recommends revised behaviourist models. In Evans and Bosworth's (1997) summary of the factors contributing to effective drug education they note that, to be effective, drug education programmes must address environmental, personality and behavioural risk factors identified through research. They emphasise the particular usefulness of social psychology in informing such provision in that it helps identify some important antecedents of drug use which serve specific functions for young people, including the opportunity to challenge parental and societal authorities, to demonstrate autonomy and independence, signal entry to a peer group and reinforce peer associations and relieve stress.

The emphasis on behaviourist approaches is far less evident in the suggestions of UK experts in drug education who are increasingly turning to multi-strand approaches with, where appropriate, a more or less explicit harm-reduction component. This prompts the question, are the differences in experts' recommendations a reflection of the differences in the actual factors which affect drug use and the effectiveness of drug education approaches in the US and UK societies? Or rather, do they mark a difference in political, health professional and moral cultures in the two countries? It seems again that there is a need for more research to resolve such questions.

5.4 Absence of adolescent perspectives

There is still resistance to approaches which deploy the perspective and experiences of users in devising drug education strategies. Approaches which attempt to build on the informal controls and measures already adopted by those who use drugs are few, and have not been largely accepted. Indeed, relatively little attention and research has focused on the cultural factors and processes involved in drug-use among young people and this has been seen by some as a crucial omission which inhibits the effectiveness of approaches

(Coggans and Watson 1995). Psychological studies and those focused on the individual can benefit from studies which place such behaviour in the broader social context in 'which it develops, is maintained and changes over the life trajectory' (Johnson 1993). These 'cultural orientation' perspectives or theories can prove most useful in better understanding the context, culture, views and needs of particular groups of young people. This information can then inform and tailor appropriate drug education strategies.

Few approaches address the needs of ethnic and other minority groups. Broad generalisations about the reasons for drug-use and simplistic responses has meant that a 'one approach suits all' perspective has characterised much drug education. Exceptions to this are that some aspects of the alternatives-based approach target minority groups in communities and is sensitive to cultural, social and other demographic factors.

Finally, it is clear from research on young people who have actually approached drug agencies that there is a need to take their perspectives into account when developing drug education and provide opportunities for young people to look at themselves and focus on the internal and external factors affecting them and the longer-term outcomes of drug use (Berry and McKenna 1995).

5.6 The need for more research and evaluation

A clear theme emerging from the literature is the need for more rigorous research and evaluation to assess the effectiveness of drug education initiatives and approaches. There is a dearth of suitable evaluations of drug education approaches and interventions. HEBS (1997) identified problems in many evaluations as including: inappropriate definitions and expectations of success as well as a lack of suitable targeting. Early interventions of drug initiatives tend to overstate the effectiveness of the programme (the 'halo' effect), while later evaluations are often more cautious in their conclusions.

In reviewing the literature on drug education evaluations it is notable that there is a particular lack of :

- programme development and process evaluations
- detailed longitudinal studies which follow substantial cohorts or use experimental or quasi-experimental methods, although the latter have also been criticised as often being simplistic
- complex and focused studies which can account for the contextual processes which affect drug misuse and drug education
- evaluations which look at approaches and programmes in the primary sector. This might be explained by the fact that it is only recently that programmes have begun to permeate primary schools. However, given that some research suggests that interventions at an earlier age might have more impact on future drug-use it is surprising that more research has not been done in this area
- evaluations of initial and inservice teacher training relating to drug education
- studies which focus on, or address, the educational process and classroom interaction between teacher and young people.

More research focused on the needs of particular groups (for example, females and ethnic groups) and the impact of drug education programmes on these groups is required.

■ 6. Conclusions about effective drug education

Given the review of the main drug education approaches and the emerging implications for future drug education initiatives, what can we say then about the most promising way forward for drug education? A report by HEBS (1997) summarises what many in health promotion feel is required for effective drug education:

> Future interventions need to be audience appropriate and based on methods which take developmental influences into account. Moreover, aims and objectives must be realistic. A range of responses is required, including: the further strengthening of personal and social education from an early age and through the school career; interventions that truly address general life-skills; provision of accurate information, including harm-reduction advice as appropriate. (p 33)

Evaluations have shown that 'there is no simple relationship between knowledge gained about drugs, attitudes to drug use and drug-related behaviour' (Scottish Drugs Forum/ HEBS 1992). There are complex personal, psychological, social and environmental factors to be taken into account in understanding drug-use and the effectiveness of drug education (Wragg 1986; 1992). Some argue that an approach which moves away from the notion of 'drug education' to 'education for a world of drugs' will be a more accurate reflection of the real world and therefore more effective (Berry and McKenna 1995). As Coggans and McKellar (1994) observed:

> In years to come it will probably be realised that to deal with social relationships and self-image in the context of drug education was in some ways naive. Educationalists have long understood that such matters should be part and parcel of the entire educational, as well as the wider developmental, experience of young people.

We have seen that some argue that the eradication of drug-use through primary intervention alone is not feasible given the complex social and psychological processes involved. Therefore, the objectives of drug education should be more realistic and include some element of harm minimisation which is carefully targeted and delivered. However, there are still continuing political and ethical debates which can impede the adoption of such approaches in schools.

This review suggests that the design and implementation of drug education programmes seem to be worth pursuing if they take into account what has already been learned about the factors which influence the effectiveness of drug education, rather than reinventing the wheel. Drug education programmes will also have to genuinely address the needs of the targeted group and work with others in the wider community. Education can play an important role in influencing young people's drug behaviours and attitudes, but the complexity of the issue means that realistic expectations of outcomes from programmes are necessary (Scottish Drugs Forum/HEBS 1992).

This literature review highlights the difficulty in developing general drug education programmes which suit the needs of all pupils. Drug education has the extremely difficult task of tailoring the content and approaches to the wide range of pupils' needs and experience. Some research argues for a more pragmatic harm-reduction approach which is targeted at those pupils who are at risk or who are already using and misusing drugs. However, the practicalities, ethical issues and other difficulties facing the implementation of this approach in a school environment are considerable.

The message for policymakers and educators appears to be to recognise the limitations of school-based drug education but, within these parameters, provide programmes which reflect what has been learned about effective school-based drug education. The limitations of school drug education can be reduced by working closely with relevant services and organisations in the community who can meet the needs of those pupils with particular drug-use and misuse needs. Raising pupils' awareness about these sources of local support and information is another area schools can develop.

Appendix 3: The Experiences and Views of Pupils Using Drugs

The following tables provide details of the findings cited in Chapter 4 of the report. They focus on S1, S3 and S5 pupils (given that the proportion of pupils P6 misusing illegal drugs was very small). The tables illustrate the differences found between those pupils reporting misuse of illegal drugs and those who do not.
Note: due to rounding effects not all % totals add up to 100%.

Table A1: Difference in % between those misusing drugs and those who do not in relation to whether they drink something alcoholic at least once a week

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Yes	387	45.1	235	90.4	622	55.6
No	217	25.3	23	8.8	240	21.4
Missing	255	29.7	2	.8	257	23.0
Total	859	100.1	260	100.0	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	171.531[a]	2	.000
Likelihood Ratio	213.463	2	.000
Linear-by-Linear Association	7.020	1	.008
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 55.76.

Table A2: Difference in % between those misusing drugs and those who do not in relation to whether they smoke tobacco at least once a week

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Smoke	46	15.5	114	58.5	160	32.5
Don't smoke	251	84.5	81	41.5	332	67.5
Total	297	100.0	195	100.0	492	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	99.059[a]	1	.000
Likelihood Ratio	97.111	1	.000
Linear-by-Linear Association	98.858	1	.008
N of Valid Cases	492		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 63.41.

Table A3: Difference in % between those misusing drugs and those who do not in relation to the proportion of their friends who smoke

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Most	71	8.3	99	38.1	170	15.2
About half	167	19.4	90	34.6	257	23.0
Hardly any	370	43.1	60	23.1	430	38.4
None	236	27.5	9	3.5	245	21.9
Missing	15	1.7	2	.8	17	1.5
Total	859	100.0	260	100.1	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	211.351[a]	4	.000
Likelihood Ratio	212.340	4	.000
Linear-by-Linear Association	172.395	1	.000
N of Valid Cases			

a: 1 cells (10.0%) have expected count less than 5. The minimum expected count is 3.95

Table A4: Difference in % between those misusing drugs and those who do not in relation to the proportion of their friends who drink alcohol

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	*n=*	%	*n=*	%
Most	314	36.6	194	74.6	508	45.4
About half	187	21.8	45	17.3	232	20.7
Hardly any	197	22.9	15	5.8	212	18.9
None	145	16.9	4	1.5	149	13.3
Missing	16	1.9	2	.8	18	1.6
Total	859	100.1	260	100.0	1119	99.9

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	133.407[a]	4	.000
Likelihood Ratio	151.588	4	.000
Linear-by-Linear Association	112.770	1	.000
N of Valid Cases	1119		

a: 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.18.

Table A5: Difference in % between those misusing drugs and those who do not in relation to the proportion of their friends who use illegal drugs

	Don't use drugs		**Use Drugs**		**Total**	
	n=	%	n=	%	n=	%
None	357	41.6	9	3.5	366	32.7
A few	294	34.2	104	40.0	398	35.6
About half	40	4.7	48	18.5	88	7.9
Most	28	3.3	82	31.5	110	9.8
All			10	3.8	10	.9
Don't know	130	15.1	6	2.3	136	12.2
Missing	10	1.2	1	.4	11	1.0
Total	859	100.1	260	100.0	1119	100.1

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	362.466[a]	6	.000
Likelihood Ratio	369.560	6	.000
Linear-by-Linear Association	36.884	1	.000
N of Valid Cases	1119		

a: 2 cells (14.3%) have expected count less than 5. The minimum expected count is 2.32.

Table A6: Difference in % between those misusing drugs and those who do not in relation to how they enjoy being at school

	Don't use drugs		**Use Drugs**		**Total**	
	n=	%	n=	%	n=	%
Most of the time	306	36.6	43	16.5	349	31.2
Sometimes	393	45.8	131	50.4	524	46.8
Missing	49	5.7	21	8.1	70	6.3
Never	111	12.9	65	25.0	176	15.7
Total	859	100.0	260	100.0	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	44.530[a]	3	.000
Likelihood Ratio	46.006	3	.000
Linear-by-Linear Association	21.705	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.26.

Table A7: Difference in % between those misusing drugs and those who do not in relation to whether they agree school is a waste of time

	Don't use drugs		Use Drugs		Total	
	n=	%	n=	%	n=	%
Strongly agree	94	10.9	11	4.2	105	9.4
Agree	520	60.5	116	44.6	636	56.8
Disagree	150	17.5	78	30.0	228	20.4
Strongly disagree	46	5.4	34	13.1	80	7.1
Missing	49	5.7	21	8.1	70	6.3
Total	859	100.0	260	100.0	1119	100.0

Chi-square tests	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson chi-square	52.324[a]	4	.000
Likelihood Ratio	51.023	4	.000
Linear-by-Linear Association	21.880	1	.000
N of Valid Cases	1119		

a: 0 cells (0%) have expected count less than 5. The minimum expected count is 16.26.

Table A8: Difference in % between those misusing drugs and those who do not in relation to their appraisal of their drug education

	Don't use drugs		Use Drugs		Total	
	n=	%	n=	%	n=	%
Didn't tell me anything new	151	17.6	90	34.6	241	21.5
Told me a few new things	357	41.6	101	38.8	458	40.9
Told me quite a lot of things I didn't know	257	29.9	41	15.8	298	26.6
Everything it told me was new	22	2.6	2	.8	24	2.1
Missing	72	8.4	26	10.0	98	8.8
Total	859	100.1	260	100.0	1119	99.9

Chi-square tests	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson chi-square	45.847[a]	4	.000
Likelihood Ratio	45.588	4	.000
Linear-by-Linear Association	31.612	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.58.

Table A9: Difference in % between those misusing drugs and those who do not in relation to the extent to which they have felt depressed by school

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Most of the time	82	9.5	63	24.2	145	13.0
Sometimes	467	54.4	126	48.5	593	53.0
Never	262	30.5	49	18.8	311	27.8
Missing	48	5.6	22	8.5	70	6.3
Total	859	100.0	260	100.0	1119	100.1

Chi-square tests	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson chi-square	46.917[a]	3	.000
Likelihood Ratio	43.191	3	.000
Linear-by-Linear Association	31.239	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.26.

Table A10: Difference in % between those misusing drugs and those who do not in relation to whether they feel it is wrong to use illegal drugs

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Yes	654	76.1	71	27.3	725	64.8
No	38	4.4	51	19.6	89	8.0
Depends on type of drug	154	17.9	134	51.5	288	25.7
Missing	13	1.5	4	1.5	17	1.5
Total	859	99.9	260	99.9	1119	100.0

Chi-square tests	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson chi-square	218.964[a]	3	.000
Likelihood Ratio	210.590	3	.000
Linear-by-Linear Association	171.580	1	.000
N of Valid Cases	1119		

a: 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.95.

Table A11: Difference in % between those misusing drugs and those who do not in relation to whether they agree drugs can help you cope with problems

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Strongly agree	9	1.0	15	5.6	24	2.0
Agree	137	15.1	114	42.7	251	21.3
Disagree	354	38.9	103	38.6	457	38.8
Strongly disagree	396	43.5	33	12.4	429	36.4
Missing	14	1.5	2	.7	16	1.4
Total	910	100.0	267	100.0	1177	99.9

Chi-square tests	*Value*	*df*	*Asymp. Sig. (2-sided)*
Pearson chi-square	151.586[a]	4	.000
Likelihood Ratio	150.339	4	.000
Linear-by-Linear Association	98.300	1	.008
N of Valid Cases	1177		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 3.63.

Table A12: Difference in % between those misusing drugs and those who do not in relation to whether they find it difficult to refuse drugs if offered

	Don't use drugs		Use Drugs		Total	
	n=	%	n=	%	n=	%
No	414	48.2	140	53.8	554	49.5
Yes	11	1.3	23	8.8	34	3.0
Sometimes	45	5.2	70	26.9	115	10.3
Haven't been offered	372	43.3	21	8.1	393	35.1
Missing	17	2.0	6	2.3	23	2.1
Total	859	100.0	260	99.9	1119	100.0

Chi-square tests	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	200.842[a]	4	.000
Likelihood Ratio	199.839	4	.000
Linear-by-Linear Association	30.062	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.34.

Table A13: Difference in % between those misusing drugs and those who do not in relation to how often they worry too much about school

	Don't use drugs		Use Drugs		Total	
	n=	%	n=	%	n=	%
Most of the time	109	12.7	56	21.5	165	14.7
Sometimes	359	41.8	95	36.5	454	40.6
Never	341	39.7	86	33.1	427	38.2
Missing	50	5.8	23	8.8	73	6.5
Total	859	100.0	260	99.9	1119	100.0

Chi-square tests	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	17.051[a]	3	.001
Likelihood Ratio	16.068	3	.001
Linear-by-Linear Association	11.852	1	.001
N of Valid Cases	1119		

a: 0 cells. 0(%) have expected count less than 5. The minimum expected count is 16.96.

Table A14: Difference in % between those misusing drugs and those who do not in relation to how often they feel good about their school work

	Don't use drugs		Use Drugs		Total	
	n=	%	n=	%	n=	%
Most of the time	263	30.6	34	13.1	297	26.5
Sometimes	484	56.3	153	58.8	637	56.9
Never	64	7.5	50	19.2	114	10.2
Missing	48	5.6	23	8.8	71	6.3
Total	859	100.0	260	99.9	1119	99.9

Chi-square tests	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	53.882[a]	3	.000
Likelihood Ratio	53.791	3	.000
Linear-by-Linear Association	19.320	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.50.

Table A15: Difference in % between those misusing drugs and those who do not in relation to how strongly they agree with skipping school if they had the chance

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Strongly agree	18	2.1	17	6.5	35	3.1
Agree	64	7.5	63	24.2	127	11.3
Disagree	373	43.4	105	40.4	478	42.7
Strongly disagree	350	40.7	53	20.4	403	36.0
Missing	54	6.3	22	8.5	76	6.8
Total	859	100.0	260	100.0	1119	99.9

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	86.910[a]	4	.000
Likelihood Ratio	80.165	4	.000
Linear-by-Linear Association	45.528	1	.000
N of Valid Cases	1119		

a: 0 cells (0%) have expected count less than 5. The minimum expected count is 8.13.

Table A16: Difference in % between those misusing drugs and those who do not in relation to how often they feel respected by their teachers

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Most of the time	285	33.2	38	14.6	323	28.9
Sometimes	388	45.2	122	46.9	510	45.6
Never	134	15.6	75	28.8	209	18.7
Missing	52	6.1	25	9.6	77	6.9
Total	859	100.0	260	100.0	1119	100.1

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	46.392[a]	3	.000
Likelihood Ratio	48.131	3	.000
Linear-by-Linear Association	17.52	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.89.

Table A17: Difference in % between those misusing drugs and those who do not in relation to how often they feel respected by their school friends

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Most of the time	352	41.0	96	36.9	448	40.0
Sometimes	381	44.4	118	45.4	499	44.6
Never	73	8.5	22	8.5	95	8.5
Missing	53	6.2	24	9.2	77	6.9
Total	859	100.1	260	100.0	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	3.585^{a}	3	.310
Likelihood Ratio	3.419	3	.331
Linear-by-Linear Association	.159	1	.690
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.89.

Table A18: Difference in % between those misusing drugs and those who do not in relation to how whether they feel a part of their school

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Strongly agree	136	15.8	26	10.0	162	14.5
Agree	547	63.7	129	49.6	676	60.4
Disagree	105	12.2	60	23.1	165	14.7
Strongly disagree	17	2.0	22	8.5	39	3.5
Missing	54	6.3	23	8.8	77	6.9
Total	859	100.0	260	100.1	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	53.134^{a}	4	.000
Likelihood Ratio	47.874	4	.000
Linear-by-Linear Association	17.079	1	.000
N of Valid Cases	1119		

a: 0 cells (0%) have expected count less than 5. The minimum expected count is 9.06.

Table A19: Difference in % between those misusing drugs and those who do not in relation to how I get on well with my parents

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Most of the time	592	68.9	123	47.3	715	63.9
Sometimes	195	22.7	93	35.8	288	25.7
Never	23	2.7	23	8.8	46	4.1
Missing	49	5.7	21	8.1	70	6.3
Total	859	100.0	260	100.0	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	48.102^{a}	3	.000
Likelihood Ratio	45.104	3	.000
Linear-by-Linear Association	25.954	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.69.

Table A20: Difference in % between those misusing drugs and those who do not in relation to how strongly they agree that they do lots of sports at school

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Strongly agree	217	25.3	50	19.2	267	23.9
Agree	330	38.4	89	34.2	419	37.4
Disagree	207	24.1	63	24.2	270	24.1
Strongly disagree	53	6.2	37	14.2	90	8.0
Missing	52	6.1	21	8.1	73	6.5
Total	859	100.1	260	99.9	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	21.355[a]	4	.000
Likelihood Ratio	19.469	4	.000
Linear-by-Linear Association	6.250	1	.012
N of Valid Cases	1119		

a: 0 cells (0%) have expected count less than 5. The minimum expected count is 16.96

Table A21: Difference in % between those misusing drugs and those who do not in relation to how often they feel safe at school

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Most of the time	467	54.4	95	36.5	552	50.2
Sometimes	278	32.4	101	38.8	379	33.9
Never	62	7.2	40	15.4	102	9.1
Missing	52	6.1	24	9.2	76	6.8
Total	859	100.1	260	99.9	1119	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	32.677[a]	3	.000
Likelihood Ratio	31.666	3	.000
Linear-by-Linear Association	13.591	1	.000
N of Valid Cases	1119		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.66.

Table A22: Difference in % between those misusing drugs and those who do not in relation to whether they mind their friends using illegal drugs

	Don't use drugs		*Use Drugs*		*Total*	
	n=	%	n=	%	n=	%
Strongly agree	24	2.5	32	15.6	56	4.8
Agree	203	21.3	120	58.5	323	27.9
Disagree	375	39.4	39	19.0	414	35.8
Strongly disagree	350	36.8	14	6.8	364	31.5
Total	952	100.0	205	100.0	1157	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	210.975[a]	3	.000
Likelihood Ratio	201.020	3	.000
Linear-by-Linear Association	187.320	1	.000
N of Valid Cases	1157		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.92.

Table A23: Difference in % between those misusing drugs and those who do not in relation to whether they think it is wrong to use illegal drugs

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Strongly agree	7	7	11	5.4	18	1.6
Agree	55	5.8	55	26.8	110	9.5
Disagree	317	33.2	104	50.7	421	36.3
Strongly disagree	576	60.3	35	17.1	611	52.7
Total	955	100.0	205	100.0	1160	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	176.572[a]	3	.000
Likelihood Ratio	166.617	3	.000
Linear-by-Linear Association	174.567	1	.000
N of Valid Cases	1160		

a: 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.18.

Table A24: Difference in % between those misusing drugs and those who do not in relation to whether they think people misusing illegal drugs can lead a normal life

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Strongly agree	22	2.3	28	13.7	50	4.3
Agree	164	17.2	82	40.2	246	21.3
Disagree	459	48.3	74	36.3	533	46.1
Strongly disagree	306	32.2	20	9.8	326	28.2
Total	951	100.0	204	100.0	1155	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	127.095[a]	3	.000
Likelihood Ratio	115.416	3	.000
Linear-by-Linear Association	116.659	1	.000
N of Valid Cases	1155		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.83.

Table A25: Difference in % between those misusing drugs and those who do not in relation to whether the type of drug being used makes it wrong to use drugs

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Yes	718	75.3	52	25.1	770	66.4
No	45	4.7	45	21.7	90	7.8
It depends on the type of drugs	190	19.9	110	53.1	300	25.9
Total	953	100.0	207	100.0	1160	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	200.582[a]	2	.000
Likelihood Ratio	188.392	2	.000
Linear-by-Linear Association	155.953	1	.000
N of Valid Cases	1160		

a: 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.06

Table A26: Difference in % between those misusing drugs and those who do not in relation to whether they would stop their son or daughter taking drugs

	Don't use drugs		***Use Drugs***		***Total***	
	n=	%	n=	%	n=	%
Strongly agree	763	80.1	98	48.0	861	74.4
Agree	157	16.5	83	40.7	240	20.7
Disagree	19	20.0	20	9.8	39	3.4
Strongly disagree	14	1.5	3	1.5	17	1.5
Total	953	100.0	204	100.0	1157	100.0

Chi-square tests	***Value***	***df***	***Asymp. Sig. (2-sided)***
Pearson chi-square	101.051[a]	3	.000
Likelihood Ratio	88.047	3	.000
Linear-by-Linear Association	71.470	1	.000
N of Valid Cases	1157		

a: 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.00.

Table A27: Illegal drugs tried by P6, S1, S3 and S5 (1997–1999)

Substance	P6 % (n=1065) 1997	P6 % (n=718) 1999	S1 % (n=1142) 1997	S1 % (n=131) 1999	S3 % (n=1145) 1997	S3 % (n=459) 1999	S5 % (n=1278) 1997	S5 % (n=325) 1999
Amphetamines	.3 (n=3)	.6 (n=5)	1 (n=15)	1 (n=1)	9 (n=101)	5 (n=21)	16 (n=200)	8 (n=24)
Amyl Nitrate*	.2 (n=2)	1 (n=6)	1 (n=16)	1 (n=1)	9 (n=104)	4 (n=20)	15 (n=192)	6 (n=19)
Cocaine	.4 (n=4)	1 (n=10)?	1 (n=9)	1 (n=2)	1 (n=10)	2 (n=8)	1 (n=16)	2 (n=5)
Crack	.1 (n=1)	.4 (n=3)	.2 (n=2)	—	.7 (n=8)	1 (n=4)	.5 (n=6)	—
Ecstasy	—	.3 (n=2)	1 (n=11)	1 (n=1)	3 (n=39)	1 (n=5)	4 (n=55)	1 (n=4)
Heroin	.2 (n=2)	.4 (n=3)	.4 (n=5)	—	1 (n=8)	1 (n=6)	1 (n=8)	1 (n=3)
Inhalants	1 (n=14)	3 (n=23)	5 (n=60)	8 (n=9)	13 (n=151)	11 (n=48)	11 (n=147)	11 (n=35)
Ketamine	.2 (n=2)	.5 (n=4)	.4 (n=4)	—	.3 (n=4)	.2 (n=1)	.2 (n=2)	—
LSD		.3 (n=2)	1 (n=14)	1 (n=1)	2 (n=76)	3 (n=12)	10 (n=127)	3 (n=10)
Magic Mushrooms	.5 (n=5)	1 (n=6)	2 (n=29)	1 (n=1)	8 (n=97)	5 (n=23)	12 (n=150)	6 (n=20)
Cannabis	1 (n=11)	3 (n=22)	7 (n=83)	6 (n=6)	30 (n=341)	25 (n=114)	46 (n=593)	41 (n=130)
Methadone	.4 (n=4)	.1 (n=1)	.3 (n=3)	—	1 (n=8)	—	1 (n=8)	—

* Not illegal but placed here for comparison with other drugs.

Table A28: Pupils' reporting using illegal drugs regularly (at least once a week to once a month) (1997–1999)

Substance	**P6 % (n=1065) 1997**	**P6 % (n=718) 1999**	**S1 % (n=1142) 1997**	**S1 % (n=131) 1999**	**S3 % (n=1145) 1997**	**S3 % (n=459) 1999**	**S5 % (n=1278) 1997**	**S5 % (n=325) 1999**
Amphetamines	1 (n=7)	1 (n=6)	1 (n=10)	1 (n=1)	6 (n=64)	3 (n=14)	9 (n=118)	3 (n=9)
Amyl Nitrate	.4 (n=4)	.3 (n=2)	1 (n=13)	—	5 (n=53)	2 (n=13)	5 (n=62)	2 (n=5)
Cocaine	.4 (n=4)	1 (n=8)	1 (n=9)	—	1 (n=10)	1 (n=3)	1 (n=16)	1 (n=2)
Crack	.1 (n=1)	.1 (n=1)	.2 (n=2)	—	.7 (n=8)	.4 (n=2)	.5 (n=6)	—
Ecstasy	—	.1 (n=1)	1 (n=11)	1 (n=1)	3 (n=39)	1 (n=3)	4 (n=55)	—
Heroin	.2 (n=2)	.4 (n=3)	.4 (n=5)	—	1 (n=8)	1 (n=4)	1 (n=8)	—
Inhalants	1 (n=10)	2 (n=13)	3 (n=32)	2 (n=3)	6 (n=72)	3 (n=14)	2 (n=32)	1 (n=5)
Ketamine	.4 (n=4)	.4 (n=3)	.3 (n=3)	—	.3 (n=4)	.2 (n=1)	1 (n=10)	—
LSD	.5 (n=5)	.4 (n=3)	1 (n=11)	1 (n=1)	5 (n=55)	2 (n=7)	5 (n=64)	1 (n=4)
Magic Mushrooms	.5 (n=5)	.3 (n=2)	2 (n=22)	—	6 (n=69)	2 (n=8)	7 (n=84)	1 (n=3)
Cannabis	1 (n=9)	2 (n=12)	3 (n=31)	5 (n=6)	16 (n=180)	12 (n=57)	27 (n=313)	23 (n=76)
Methadone	.4 (n=4)	.1 (n=1)	.3 (n=3)	—	1 (n=8)	.5 (n=2)	1 (n=8)	—

Appendix 5: School Drug Education: Main Resources Used

Notes

The census question concerning detailed breakdown of resources information was present only on the full, detailed version of the census hence the relatively low number of responses. Also, a relatively low proportion of primary schools teach drug education for year groups younger than P6.

The categories were generated from teachers' responses to an open question and are not mutually exclusive. Teachers could provide up to eight resource names for each year group. Therefore, the percentages indicate patterns in the deployment of drug education resources/materials and allow rank ordering within the year groups.

We see that for both primary and secondary schools, the most popular resource approach is to mix a variety of material, usually selected components of *Drugwise* and TACADE with a diverse range of other materials. *Health for Life* resources and Police Box and other police materials are also popular with primary school teachers.

In the secondary schools we can see that structured resources are less popular choices for teaching older pupils and they decline in use as we progress through the age groups. For older pupils, particularly S5, teachers prefer to use visiting or external speakers. The use of video and recordings of relevant television programmes is also constant across the year groups.

There is consensus across primary and secondary teachers over the rationale for selecting resources. The perceived suitability of the resources for pupils' needs and their abilities is the primary concern, with the next most influential factor being recommendations from the local authority. Awareness and ease of access are also important.

Table A29: Primary school drug education resources

Resources	***% of Primary schools using cited resources*** n=84	***P1*** n=18	***P2*** n=20	***P3*** n=23	***P4*** n=29	***P5*** n=34	***P6*** n=53	***P7*** n=77
Mix of resources customised from Drugwise, TACADE and in-house materials	25	37	37	36	25	23	20	23
Unspecified TACADE	16	12	14	13	17	20	18	15
Drugwise First	14	6	6	8	17	14	14	18
Health for Life	8	17	14	18	11	9	5	4
Police Box	8	6	9	8	10	8	10	6
Drugwise too	7	-	-	-	4	2	7	15
Other police materials	6	6	6	5	4	5	10	3
Local health promotion materials	5	6	6	5	4	6	5	2
TV & video recordings	4	3	3	3	2	2	4	5
Outside speakers	4	-	-	-	2	3	3	3
Escape AIDS	1	3	3	3	2	2	1	1
HELP resource	1	3	-	-	-	2	1	1
Smoke busters	.4	-	-	-	-	-	1	1
Think twice: drugs can kill	1	-	-	-	-	-	1	1
STEPS	.2	-	-	-	-	-	1	-
Drugwise drug free	.2	-	-	-	-	-	-	1
Totals	100	100	100	100	100	100	100	100

Table A30: Secondary school drug education resources: Rank order of resource use

Resources	***% of Secondary schools reporting using cited resources*** n=159	***S1*** n=138	***S2*** n=147	***S3*** n=128	***S4*** n=98	***S5*** n=90	***S6*** n=66
Mix of resources customised from Drugwise, TACADE and in-house materials	35	30	28	31	37	52	51
Drugwise First	8	13	10	7	7	3	0
Drugwise too	7	16	12	3	3	1	1
Unspecified TACADE	7	10	9	6	5	5	4
Drugwise drug free	6	4	3	12	10	3	4
Outside speakers	5	4	4	3	5	9	14
Local Education Department resources	4	3	2	2	2	2	3
Skills for adolescence	4	7	8	2	1	0	0
Its my life	4	0	5	9	5	1	2
Lea Betts related resources	3	2	1	3	7	3	1
Police materials	2	3	2	1	0	1	3
TV & video recordings	5	7	5	6	6	6	5
PSST (alcohol resource)	2	0	1	4	4	2	1
Local health promotion materials	1	.4	.4	.4	1	3	2
Really useful guide to alcohol	1	0	1	1	2	0	1
Think twice: drugs can kill	1	1	.4	2	1	1	1
Miscellaneous other resources under 1%	5	1	12	7	4	8	·7
Totals	100	100	100	100	100	100	100

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